PULP & PAPER

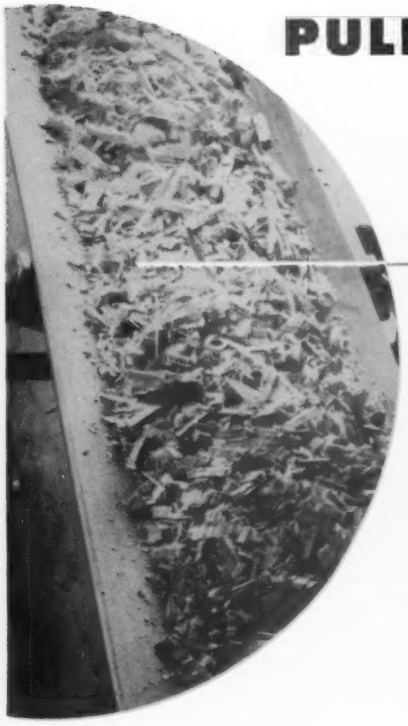
MARCH 1956–30th Year

P&P Panel on Union Relations
page 71

How IP Solves Water Problems
page 73

"By Liner" by Alaska Governor
page 79

Site of Alaska's Last Big Timber Sale



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AMMONIUM BISULPHITE Pulping

Leading mills have converted to the Ammonium Bisulphite Pulping Process because they found pulp production is increased, *while pulping costs go down.*

The changeover to this Pulping Process–pioneered by us–is inexpensive. A minimum replacement–and in many cases, no replacement–of equipment is involved, and there is practically no loss of production during conversion. Check the partial list of advantages below, then wire, phone or write us today. A member of our Technical Service staff will call, give you full details, facts and conversion methods. No obligation!

- **More pulp**—a higher proportion of acceptable pulp of increased freeness is produced, thus increasing the capacity of knotters, deckers, washers and fine screen equipment.
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Title_____

Company_____

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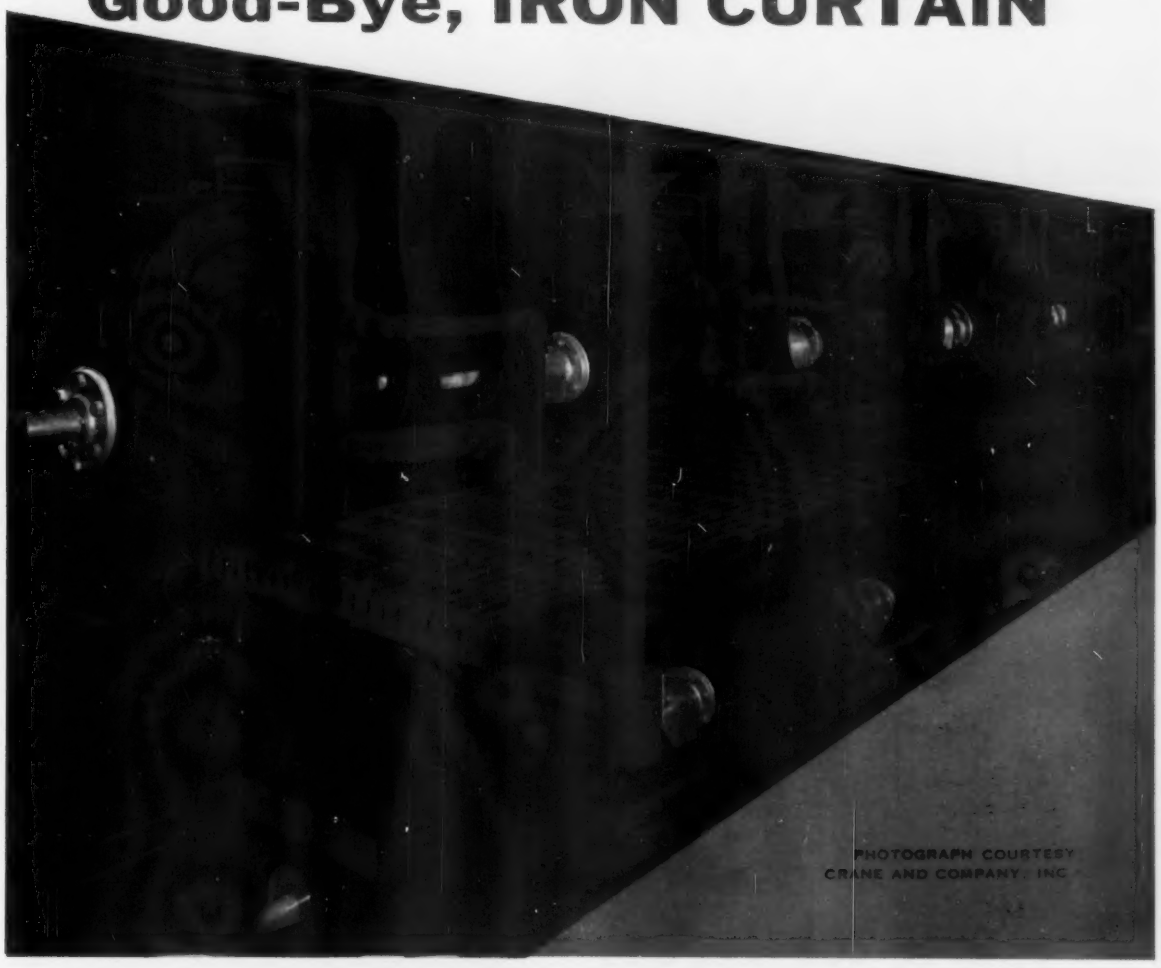
Good-Bye, IRON CURTAIN



Rice Barton's new Worm Gear Drive* has eliminated the Iron Curtain of Dryer Gears.

Now the drying characteristics of the front and back sides of the section are alike.

The Rice Barton Worm Gear Drive* provides equalized ventilation plus quieter safer operation.

*PATENT APPLIED FOR

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Worcester, Massachusetts

Paper Machine Builders Since 1837

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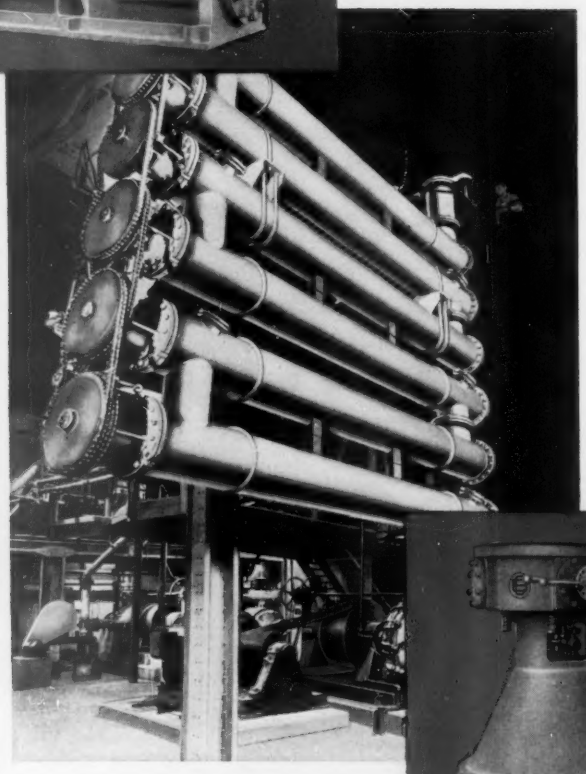

Pandia Continuous Discharger

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. . . now Making High Strength Pulps from Wood Waste

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Pandia Continuous Digester installations, cooking 100% waste wood with kraft or neutral sulphite liquors, now enable several mills to salvage everything but the bark . . . and in some cases even the bark.

Advantages of this process are added economy, short cooking cycle and high grade pulp production. Contact Pandia for full information on these successful installations.

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PULP & PAPER

March 1956

VOLUME 30
NUMBER 3

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MILLER FREEMAN PUBLICATIONS

Special Panel Discusses Pros and Cons of Negotiation 71
Bargaining tactics and ethics, relations with unions and employes discussed by PULP & PAPER's own panel of industry leaders

International Paper Solves Water Problems with Ditch 73
How Georgetown mill joined two rivers with 17-mile-long canal

Last Big Timber Sales Over, Alaska Enters New Era 79
Territory governor writes his comments on Sitka sale, and of future period of development for the Northland

Plans Multiply in South as Expansion Continues 85

Fox River Paper Corp. Improves Quality 89
Increased production and many benefits resulted from changes

Holyoke "Incubates" New Industries 92
Part 2 of P&Ps series on "Paper City" and its case histories

Unpopular Subject of Newprint Popular at Montreal 96
Fowler lays it on the line in newsprint controversy. Feared threat to U.S. fine paper industry takes back seat

Forestry Professor Urges Changes in TRR 104

Paper Week Delegates Concerned over Pollution 104

Large Number Turn Out for Southeast TAPPI Meet 107

Manganese Ore Plant Uses Kraft Soap 108

Woodpulp Commerce as a Consumer Sees It 113
William Beckett discusses common interests with producers

G-E Unveils Entirely New Motor Line 130

How New Evaporator Works for Camas Mill 133

Aquavac Increases Drying Capacity 134

● **PULPWOOD SECTION**

South's No. 1 Problem: "Catch that Arsonist!" 116
J. E. McCaffrey discusses problem of uncontrolled forest fires

Southern Meeting Accents Fire Menace 118

Major Reshuffle of Timber in South 121

New Flotation Process Barks Alder 125

Amazing Wood Yield per Acre in Italy 128

● **STRICTLY PERSONAL**

Northeast	6	Far West	22, 26
South	6, 10, 14	Canada	26, 30
Middle West	14, 18	Pulpwood	128, 129

● **OTHER DEPARTMENTS**

Picture News of Industry	82	How To Do It	111
And I Quote	95	News from Canada	138
Worldwide Industry News	110	Equipment & Supplies	140

● **COVER PICTURE**

Cover shows first cutting area in Sitka, Alaska, pulptimber unit recently sold to Japanese firm. This stand of hemlock and spruce is at head of Katlian Bay on Baranof Island. (Photo courtesy U.S. Forest Service.)

PULP & PAPER — EDITOR READS HIS MAIL

One Newspaper on Our Side

You have been giving very effective attention in your editorial columns to the uproar occasioned in both Canada and this country by the recent increase in newsprint prices, and I wanted to let you see that at least one newspaper editor is on your side of the argument. A recent editorial from the Toronto *Globe and Mail* is reproduced below:

"THE SHAME OF SILENCE—As a prelude to the introduction of price controls on newsprint, Premier Duplessis (Quebec) has made a vicious, punitive attack on the Anglo-Canadian Pulp and Paper Co. for what he describes as 'provocation.'

"The impact of the premier's words—accompanied by an arbitrary tax increase—must go far beyond the company and the industry of which it forms a part. He has raised a club over the heads of every company, every individual, doing business in Quebec.

"But we are not interested in arguing the company's case; it is quite capable of defending itself. The issue in Quebec is more important than Anglo-Canadian. It is more important than the entire newsprint industry of that province. The issue in Quebec is the freedom of the press. As we understand that freedom, it can only be maintained by being earned, it can only be earned by being used.

"Mr. Duplessis came to his present course of action logically, inevitably. It was the direct consequence of his determination to control newsprint prices. We do not believe for a moment that he reached that determination without the encouragement of Quebec's newspaper publishers. Those who did not encourage it actively, did so silently.

"In Argentina, the dictator Peron had to silence the newspapers by seizing them. In Quebec, it would seem, they can be silenced by saving them a few dollars.

"Let the Quebec publishers, and their apologists elsewhere, not try to take refuge in phony moral and social arguments. If and when it is established—as it has not been in Quebec—that the newsprint industry of any province is profiteering from its use of public resources, the government of that province can deal with it by normal methods of taxation.

"The newspaper publishers, in turn, can deal with it by normal methods of discussion. We know of nothing that prevents them from approaching the newsprint industry and laying their cards on the table. If they are right, they have the special advantage of possessing a medium through which they can make that fact known both to the public and to governments.

"Newspapers do not need, and should never ask, governments to intervene in their business affairs. The day they allow that to happen, they have surrendered the two things that justify their existence—their freedom and their independence.—*Toronto Globe & Mail.*"

To this, I cannot resist adding a further comment in connection with the loud cries emanating from some of our political friends about "freedom of the press." The newspapers enjoy the freedom to sign up as much advertising as they can and at rates set by themselves.

Readers are forced to accept the advertising, frequently padded out with canned articles that are themselves only poorly disguised advertising.

Since the bulk of the newsprint demand is established by advertising and not by editorials or real news items, it does seem that the newspaper publishers and their political friends should allow the paper mills enough freedom to establish a proper selling price for newsprint.

J. E. GOODWILLIE
Beloit, Wis.

V For Editorials—see page 156

Kind Words from Montreal

We consider that PULP & PAPER does a very valuable job in putting before us facts and figures which help us to plan the future more assuredly.

G. T. COCKERILL,
Administrative Vice-President, Bathurst Power & Paper Co. Ltd.

Tomorrow's Scientists—What Industries Can Do

We think you will be interested in a booklet "Tomorrow's Scientists and Engineers" which has just been published by the N.A.M. Research Committee. You will note (in the booklet) that we are endeavoring to get industrial companies to take an interest in their local schools in promoting this cause.

If allowed to continue, the critical shortage of scientists and engineers in the United States will have grave consequences: our industrial development will be curtailed substantially and the safety of the United States will be threatened, because Russia is now surpassing us in engineering graduates.

After extensive study, the Research Committee finds that deficiency in scientists originates in the secondary schools. A student thinks that scientists are "cold, calculating people, without social instincts." . . . a counsellor discourages a bright student from taking physics because it is "too hard" . . . a college graduate accepts a salary from a corporation of $4,800 rather than teach high school science at $3,200 . . . a science teacher transfers to a business job where he has social acceptance.

You will note in our booklet we are endeavoring to get industrial companies to take an interest in their local schools. Here are specific suggestions which a company can use in its own community. We ask companies to place this booklet in proper hands—so the company may participate in this program.

We have had very interesting results from this type of approach.

ALLEN ABRAMS,
Chairman, NAM Research Committee, Director of Marathon Corp., recently retired as Vice Pres., Private Industry Research Consultant, Wausau, Wis.

Eds. Note—Write National Assn. of Mfrs., 2 East 48th St., New York 17, N.Y., for this most useful booklet: "Tomorrow's Scientists and Engineers." It explains how your company can recognize and help teachers, also students, and improve their acquaintance with your industry

The Story of Holyoke

We in Holyoke are delighted with your articles on "The Paper City" which began in your February issue. The Holyoke Transcript is printing the article verbatim.

C. H. Kent
Asst. to President, Hadley Falls Trust Co., Former Mgr., Hercules Powder Co., Holyoke Plant.

"Covers All of U.S."

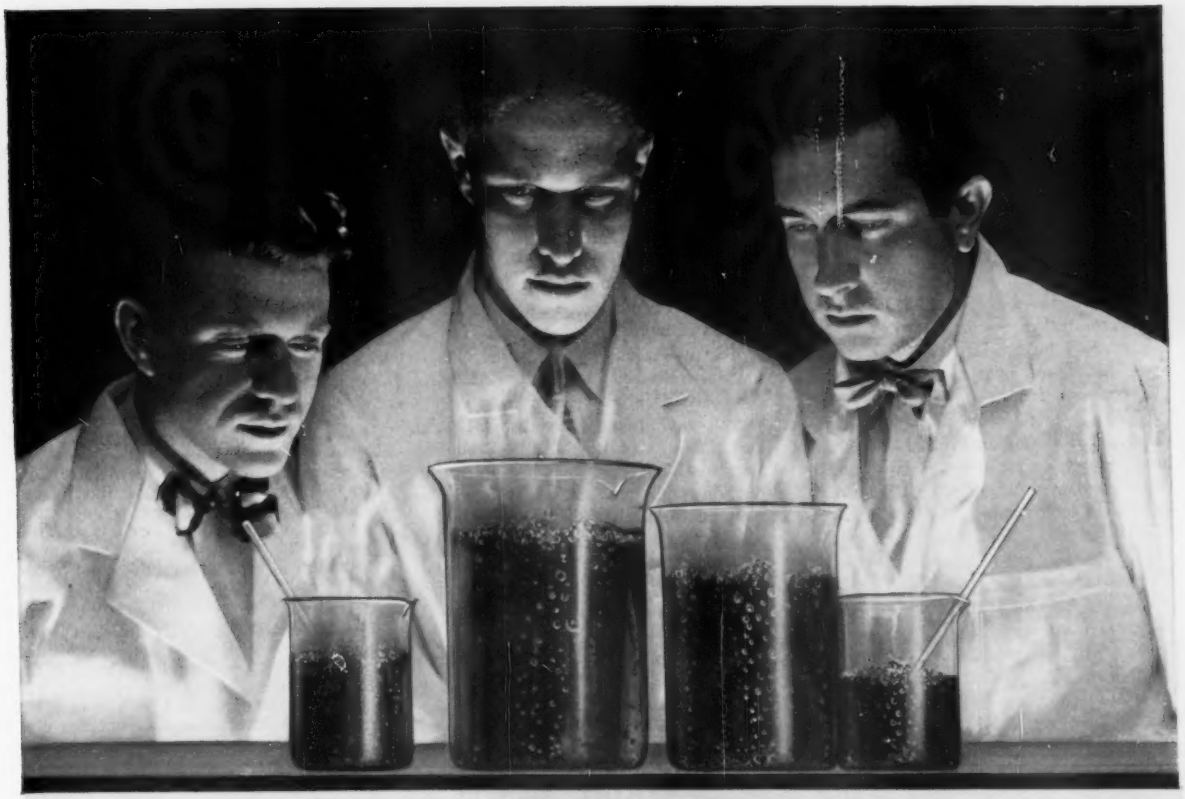
PULP & PAPER is very interesting to me because it covers happenings in all parts of country and because it also reports a lot of personal doings.

GEORGE C. DUNN,
Executive Vice Pres., Dunn Paper Co., Pt. Huron, Mich.

HERE'S HOW to address your letter to this department:

No anonymous letters will be considered but names may be withheld if desired.

The Editor
PULP & PAPER
1791 Howard Street
Chicago 26, Illinois



Where too many "cooks" DON'T spoil the broth!

Good "cooking" makes for good cellulose. Here at Buckeye, giant 60-ton digesters give our raw materials just as fine a "cook" as man can devise!

But . . . while each "cook" is in progress, samples are continuously being checked and tested in our laboratories. The result? Exacting down-the-line production control to guarantee you a Buckeye product *precisely* suited to your need.

This is one of 27 controls used by Industry's first producer of cellulose . . . a process that combines care with imagination in the making of *both* cotton linters and high alpha wood cellulose.

Two great plants . . . at Memphis, Tenn. and Foley, Fla. . . . offer the finest facilities for production, research, and customer service.

If you have a cellulose problem, why not write to Buckeye? You'll find our staff of technicians easy to talk to . . . and, better still, quick with the answers! Please address inquiries to: Buckeye Cellulose Corporation, Dept. 6-2DI, P.O. Box 6746, Memphis 8, Tenn.

BUCKEYE ...first in cellulose

STRICTLY PERSONAL

Notes from Northeast

JAMES E. KUSSMAN returns East to be resident mgr. of St. Regis Northern New York mills. He has been assistant mgr. for St. Regis at Tacoma, Wash., and before that was Panelyte division mgr. in Kalamazoo. . . . **RALPH G. CURTIS,** master mechanic, St. Regis Carthage, N. Y., is sporting a 35-year service pin. He spent over two years in the Europe war theater in WW I. . . . **BOB ZINSMEISTER,** former tech. supt., Kimberly-Clark's Niagara Falls, N.Y., No. 1 mill, is now paper machine day foreman there, and was succeeded by **BILL RUSSELL** as tech. supt. . . . **RUDOLPH T. GREEP,** production mgr., Cumberland Mills, S.D., Warren Co., was honored as "Papermaker of the Month" by Noble & Wood's "Agitator." He was born on a Kansas farm, graduated from Kansas State with honors, and MIT. He won legion of merit as chief of Chemical Warfare Protective Development, served on Pacific Warfare Board in New Guinea and the Philippines, was mustered out a lieut. colonel. . . .

Speaking of close shaves, **ELMER HUNTING,** divisional chemist, Fraser Paper, Ltd., Madawaska, Me., was aboard the Northeast Airliner that made headlines when it lost all electrical power and radio contact out of Boston. Nothing daunted, after a safe landing at La-Guardia, Elmer took off again that night for Dallas and flew through heavy fog. . . . Brooklynite **RICHARD M. SIBLEY** has signed up with Dorr-Oliver as sales engineer, Eastern Filtration Division. He has a bs from Penn State and ms from Purdue. . . . **KURT C. NEUNFELDT** was promoted by Hammermill Paper Co. to chief engineer. He's a grad of Papier Technikum, Altenburg, Germany, a 33-yr. vet with Hammermill. As product development engineer, he was in charge of their new Neutracel pulp and bleach plant. . . . **DR. RICHARD W. BROWN,** a grad of Haverford College and Institute of Paper Chemistry, also got a promotion to assistant director of Hammermill's laboratories. He joined Hammermill in 1950. . . . **BRADLEY STEVENSON,** formerly in sales with Port Huron Sulphite & Paper Co., has joined his father, **DR. LOUIS T. STEVENSON,** at Tucker, Anthony & Co. Bradley attended Duke, NYU and U. of Lausanne, Switzerland. . . .

FRANCIS M. MYERS, supt., Columbia Box Board Mills, Inc., Chatham, N.Y., was also saluted by Noble & Wood as a Papermaker of the Month. He helped develop Krafibre, the company's new boxboard. . . . **ROBERT MANN** has joined Mann Engineering Co., Pittsburgh, Pa., as sales engineer. They are sales rep for Fuller Co. in western Penn., all Ohio except Toledo and parts of N.Y. and Kentucky. . . . **D. JOSEPH DUGHIE** mgr. of Scott's South Glens Falls, N.Y., plant, has been selected to attend an advanced management program at Harvard U. He will then go to Chester, Pa. as mgr. of industrial engineering. **ALBERT N. GARRETT,** former mgr. at Scott's Sandusky, O., plant, succeeds Mr. Dughie at So. Glens Falls. **RALPH WYTHES** succeeds Mr. Garrett and his job as production mgr. at Scott's Cut-Rite wax plant in Hoboken, N. J. is taken by **W. MAXWELL DONNELLY. WILLIAM C. KRAUSE** present Hoboken plant engineer, takes on additional duties of maintenance engineer. . . . **JOHN H. WARTLUFT,** traffic manager at Hoboken, enters industrial sales in Detroit and **EDWARD F. REESE,** formerly finishing div. manager in Hoboken, succeeds Mr. Wartluft. . . .

LAWRENCE J. VALMORE has joined Lockport Felt Co. as technical service rep. under **RICHARD S. BUCKLEY,** director of sales and service. He will reside at Newfane with his wife and four children. . . . **T. H. MITTENDORF,** vice president of sales, Hudson P&P Corp., was re-elected president of The Paper Bag Institute. . . . **WILLIAM M. ALLIN,** gen. sales mgr., Southern Advance Bag and Paper Div. of Robert Gair Co., Inc., was re-elected vice pres. . . . **LUCIEN FORTIER** and his supervisor, **ALFRED MAROIS** of Brown Co.'s Burgess Mill (sulfite), were saluted recently in The Brown Bulletin for good work when a connection from car of sulfur dioxide to the mill broke. Lucien put on a Chemox and worked 45 mins. preventing gas from escaping, saving some $2,500 worth. . . . **J. C. CARY** is a new field man from Morris Machine Works, working out of N.Y.C., covering N.Y., northern N.J. and Long Island area. He's a Rensselaer Polytechnic Institute grad and a Navy vet. . . .

HAROLD L. BRAGDON is manager of purchasing, S. D. Warren Co. with **CHARLES A. GOODING** as assistant manager, advises **EVERETT P. INGALLS,** vice president–manufacturing. **CARL J. NEILSON** becomes master mechanic with **EDWARD MAYBERRY,** assistant. . . . **HAROLD HOLDEN,** president, Eastern Corp., is quite proud over his company's election to membership in the Assn. of National Advertisers. ANA comprises 500 leading national advertisers. . . . **SYDNEY R. BRUCE,** formerly asst. plant mgr. of Eastern Division, Stone Container Corp., moves up to plant mgr. succeeding **CHARLES CUMBY,** who is new plant manager of their box factory in Chicago. . . . **J. HOWARD WRIGHT,** Bauer Bros., recently moved into his new home at 4013 Briar Lane, Lafayette Hill, Pa. . . . **HARRY SHADE,** general foreman, woodroom, Hammermill Paper Co., had tough luck during hunting season—lost his license. Harry recently visited his daughter in Ft. Wayne, Ind. . . . **WILLIAM N. HURLBUT,** vice president and director, International Paper Co., died suddenly Feb. 4. He was a pioneer in the development of newsprint manufacturing in U. S. and Canada. . . .

New Bolton-Emerson Reps

Richard J. Powers (left), new Sales Rep. for John W. Bolton & Sons, Inc., manufacturers of machine knives and stock preparation equipment, was with Thilmany Pulp & Paper Co. He will service mills in Midwest states under supervision of Joseph M. Steiner, recently named Mgr. of Bolton's Midwest Region.

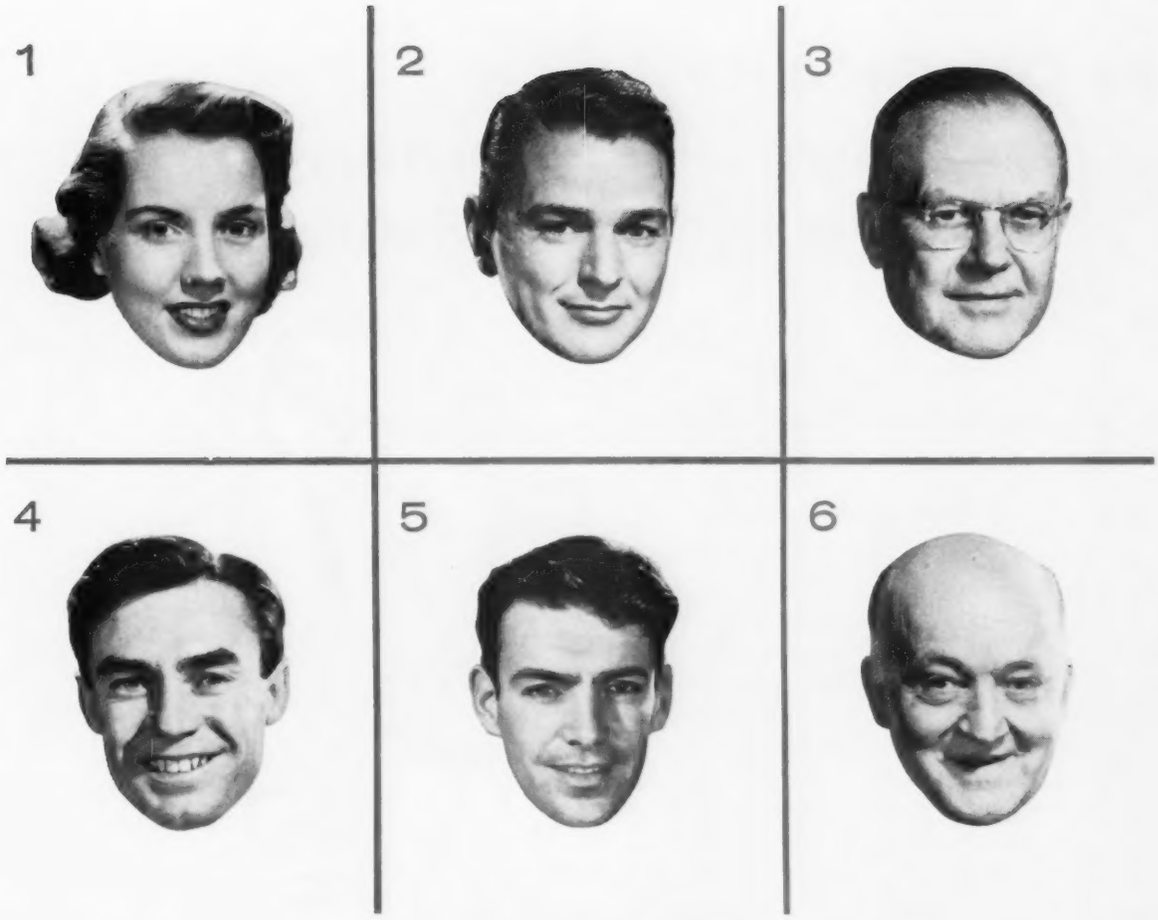
F. RICHARD CONVEY (middle), new Sales Rep. in the northern section of Southern Region, including Tenn., N.C., S.C., north Ga., Ala., Miss. and Ark. He will work under **Samuel E. Crocker, Jr.,** Mgr. of Bolton-Emerson's Southern Region.

JOHN L. SIGLER (right), new rep. for New England, has taken over accounts formerly served by Lawrence R. Mitchell, recently made Sales Mgr. of Bolton's Emerson Division.

Southern Sidelights

E. W. PRENDERGAST, former branch manager for Foxboro Co. in Atlanta, has been named regional manager of the Southeast territory. He'll direct Foxboro instrument sales in Miss., Ala., Ga., Fla. and parts of Ark., Tenn., N. C. and S. C. **L. C. ESTES** takes over the Atlanta branch, **G. W. REED, JR.,** is new manager at New Orleans and **J. K. YOUNKINS** at Charleston, W. Va. . . . **DICK WEAVER,** technical asst. to pulp supt., and **AB ROGERS,** instrument man, both from I. P.'s Natchez mill, are on "loan"

Continued on page 10



Can you pick the SOLVAY Salesman?

They all are! The girl from accounting, the young man from traffic, the production expert or the man who fills the bags, the chemist in quality control, the old-timer in shipping . . . at Solvay everyone helps create sales by serving the customer.

The man you know—the salesman who calls on you—isn't shown; however, there's a staff of 6,000 men and women working with him to service your account. The service they render is just one reason why so many customers stay sold on Solvay.

But, Solvay service doesn't end with the sale. To many customers Solvay's Technical Service is the big plus value. This department stands ready to help you with process or product problems by supplying services not ordinarily available—at no extra cost.

Yes, Solvay salesmen—all 6,000—serve our customers. Call Solvay and see!

AMERICA'S FIRST PRODUCER OF ALKALIES
SOLVAY
75th YEAR
1881-1956

Soda Ash • Snowflake® Crystals • Chlorine
Potassium Carbonate • Calcium Chloride
Sodium Bicarbonate • Ammonium Chloride
Ammonium Bicarbonate • Caustic Potash • Chloroform
Sodium Nitrite • Caustic Soda • Methyl Chloride
Cleaning Compounds • Methylene Chloride • Monochlorobenzene
Para-dichlorobenzene • Ortho-dichlorobenzene • Hydrogen Peroxide

SOLVAY PROCESS DIVISION

Allied Chemical

ALLIED CHEMICAL & DYE CORPORATION
61 Broadway, New York 6, N. Y.

BRANCH SALES OFFICES

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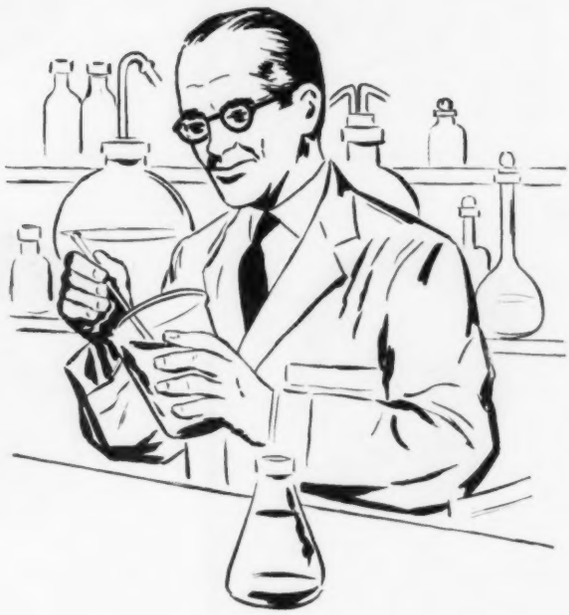
Houston • New Orleans • New York • Philadelphia • Pittsburgh
St. Louis • Syracuse

At ORISKANY...

Chemistry is putting extra life into Felts!



New chemical treatments actually increase fibre strength and resistance to wear . . . improve finish and drainage

Chemistry is working wonders in our laboratories at Oriskany to produce more durable felts. We've blended synthetic and wool fibres in hundreds of combinations to test against standards for finish, drainage and strength. We've developed, in our testing, formulas that build into the fibres completely new physical and chemical properties. These tested and proven characteristics are prolonging felt life on today's highest-speed machines . . . and they're meeting specific requirements for finish and drainage!

Exclusive new T-10 formula protects fibres against bacterial damage

Coupled with our intensive research on fibre strength, we have produced a chemical treatment that protects felts permanently against the harmful effects of bacterial action. Continuing experiments, both in our laboratories and in the field, indicate that we are making important contributions to paper-making progress in this respect.

Talk to the man from Oriskany

You can count on our experienced sales engineers for sound, helpful advice on your felt problems. They are thoroughly familiar with the technical progress we are making in our laboratories, and they bring you news of our design improvements that can help you make better paper products . . . faster . . . at less cost!

First choice—because They last **Oriskany WATERBURY FELTS**

H. WATERBURY and SONS COMPANY • ORISKANY, NEW YORK

Laboratory tests of PUGET PULP

Converting mills use

PUGET PULP

in making paper cups and plates, napkins, and tissues of all types

PUGET PULP is bleached sulphite—clean and clear enough for the finest product, strong enough for the hardest use.

PUGET PULP is produced in steadily expanding amount in one of the most scientifically up-to-date mills in America.

PUGET PULP is made expressly for the market. Converting mill users are assured of a steady supply from a single non-competitive source.

Gear your operations to **PUGET PULP**.

With output now exceeding 450 tons daily, more PUGET PULP is available for the market

PUGET SOUND PULP AND TIMBER COMPANY

BELLINGHAM • WASHINGTON

STRICTLY PERSONAL

MORE SOUTHERN SIDELIGHTS to the Ticonderoga, N. Y., mill—helping start its new bleach plant. . . . Congrats are due **CARL O. SKOGGARD,** who has been promoted to asst. manager for production at West Virginia's Covington mill. **EDWIN K. SCHOLZ,** asst. supt., becomes pulp mill supt., according to **CRAWLEY WILLIAMS,** mill manager. . . . Industry was saddened by death Jan. 8 of **DR. GERALD HAYWOOD,** tech. asst. to the mgr. of technological research and development at West Virginia. Dr. Heywood had been with West Virginia 40 years, held important patents in machine coating and use of pigments. . . . **CAMERON & BARKLEY** Co. in Charleston, S. C., has been appointed distributor for **BABCOCK AND WILCOX** welded and seamless steel tubing and pipe. . . . and **J. E. KENNARD,** Tampa, is new sales representative in Florida for **MORRIS MACHINE WORKS,** heavy duty slurry pumps. . . .

TRONA®
SALT CAKE
FOR
QUALITY KRAFT
PRODUCTION
TRONA, long the largest basic source of natural sodium sulphate (Na_2SO_4) continues to produce highest purity uniform grade Salt Cake, to keep pace with the expanding kraft paper industry. You can be sure, when you specify TRONA, of an *adequate* and *dependable* source of supply for this essential ingredient in quality kraft production.
American Potash & Chemical Corporation
TRONA
INDUSTRIAL AND AGRICULTURAL CHEMICALS
ESTON
Offices • 3030 West Sixth Street, Los Angeles 54, California
99 Park Ave., New York 16, New York
Plants • Trona and Los Angeles, California

South's Hospitality Misfires

At a recent meeting in the South, a gentleman from the North, suh, was in the middle of a speech and tugging at his collar and dabbing his face with a handkerchief. The heater was working overtime. Everyone in the room was uncomfortably hot. Finally the moderator sneaked behind the speaker and threw open a window. A blast of cool air relieved the heat but the speaker faltered for a full two minutes, stumbling over his speech. Finally, he found the track and finished smoothly.

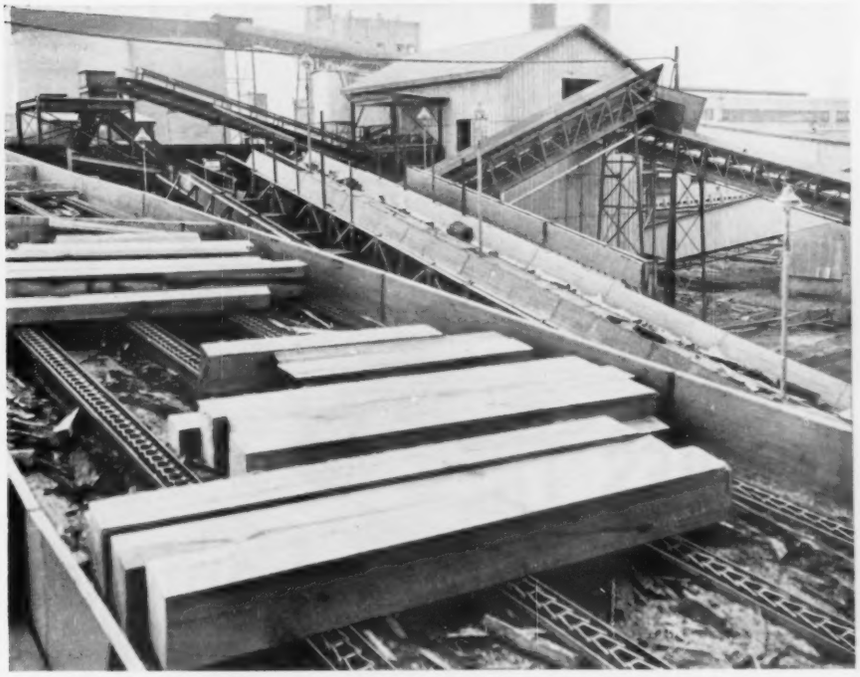
Afterwards one of his friends asked him what happened. "Southern hospitality, huh!" he groaned. "When that window was opened and that cool **South** wind hit me, my glasses fogged up and I lost my place."

FRANK P. MAXEY, formerly with Munising Paper Co., Munising, Mich., has joined Frontier Paper Co. He is being indoctrinated at Wichita, Kans., headquarters, and then will be sales rep out of Dallas, Tex., serving Dallas and Gulf Coast mills. . . . **J. T. FRASER,** purchasing agent for Southern Advance Division, Robert Gair Co., Inc., Hodge, La., is back in circulation again after a heart attack in late December. . . . **THOMAS S. BARTLEY** is promoted to plant engineer, International's Mobile mill, succeeding **S. L. FOSTER, Jr.,** now plant engineer of the Mobile bag factory, according to Mill Mgr. **J. A. LYDEN** of Mobile. . . . **EVERETT B. MILLER,** E. B. Miller Co., 6636 Clayton Road, St. Louis 17, Mo., is new sales representative for Hammel-Dahl Co., Providence, R. I., control equipment, in that area. . . .

Personnel at **UNION BAG & PAPER CO.** contributed $1,500 to the Savannah Symphony Society to help keep the musical group alive. . . . Once a month several executives from National Container in Jacksonville journey 80 miles to Valdosta, Ga., to attend meetings of the Executive Club there. They are men who helped start up the Valdosta mill and they keep their friendships warm by maintaining membership in the club there. . . . **LINK-BELT** has opened a new office at Shreveport, La., **GERALD A. STONE** in charge as district manager. . . . **EMMETT WILSON** has been appointed foreman of the Ecusta Paper Corp. pulp mill. He succeeds **WADE SCROGGS,** who died in November. Mr. Wilson has been with Ecusta since 1939. . . . **ST. REGIS** at Jax is sponsoring a contest to get a name for new Beloit paper machine. Prize is $100—generates spirit and interest. . . . **ROBERT L. (BOB) GERSON** steps into newly created job as director of public relations and sales promotion for Atlanta Paper Co. **WIL-**

Continued on page 14

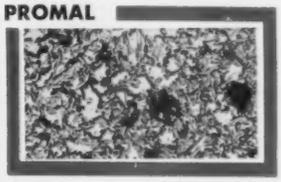
Where conveyors must resist shock loads and abrasive wear, modern mills specify PROMAL chain



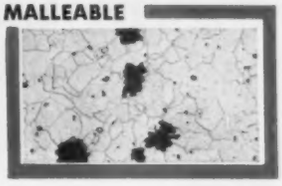
Link-Belt Class H Promal chain carries cants to chipping machine at kraft pulp mill.

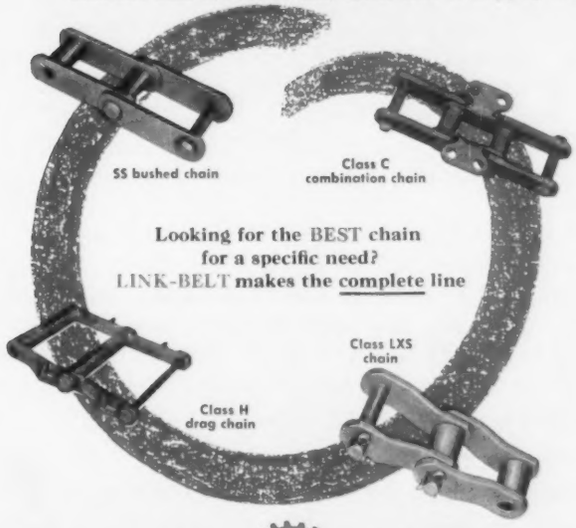
Microphotos show the difference between ordinary malleable iron (bottom) and Promal. White areas represent soft metal. The black network structure indicates stronger, stiffer material, which acts as a reinforcement, preventing distortion under load and strengthening the material.

PROMAL



MALLEABLE




SS bushed chain
Class C combination chain
Looking for the BEST chain for a specific need?
LINK-BELT makes the complete line
Class LXS chain
Class H drag chain

LINK-BELT

CHAINS AND SPROCKETS

Promal is a stronger, longer-wearing metal developed by LINK-BELT

WHEREVER you can economize by reducing conveyor shutdowns and minimizing replacements, it's worth your while to specifically request Promal chains. This specially-treated malleable iron is actually transformed into a metal of radically different physical properties, among them greater ultimate strength... higher yield point... exceptional fatigue resistance and a remarkable capacity to withstand abrasive wear. It can be repeatedly heated to a maximum of 1000°F. and cooled without affecting its physical properties.

Promal is far more than a partially annealed or skin-hardened iron. It maintains its properties permanently because of its uniform structure throughout. For unusual abrasive conditions, Promal chain may be furnished with file-hard surfaces. In paper mill applications—under continuous impact loads and abrasion—Promal means longer service, lower conveying costs.

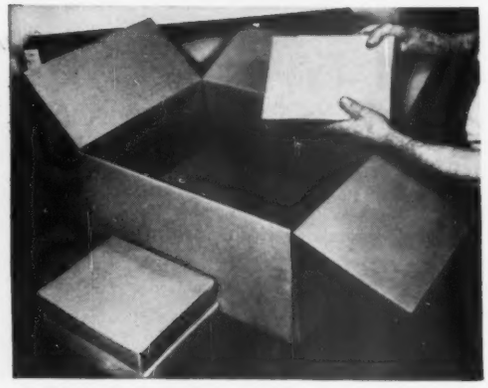
The complete Link-Belt chain line includes cast, combination, forged and fabricated types plus roller and silent chains. Also, a full selection of attachments permits the right arrangement to meet your needs exactly. Call your nearest Link-Belt office for a recommendation, or see your authorized stock-carrying distributor.

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville, N.S.W.; South Africa, Springs. Representatives Throughout the World.

13,893

REPELLENT WADDING—The unique characteristics of Aquapel make it ideal for sizing grades like cellulosic cushioning materials, which have formerly presented difficult problems. A new concept in sizing, Aquapel reacts chemically with cellulose fibers to form a surface that is resistant to the penetration of water, acid, and alkali.

AQUAPEL® SOLVES THE TOUGHEST SIZING PROBLEMS



JUTE LINERS—Efficient sizing of alkaline jute liners for corrugated boxes has always been difficult to obtain. Now Aquapel makes it easy without sacrificing strength. A small amount of Aquapel provides a degree of resistance to moisture that keeps boxes looking better longer.

Impossible to size? If you haven't tried Aquapel, you haven't tried the new concept in sizing that makes the difficult look easy.

There are many good reasons for the Aquapel difference. To begin with, Aquapel is not just "another sizing agent." Neither resin nor wax, Aquapel is a chemical compound that becomes an integral part of the fiber. It is never just "stuck on."

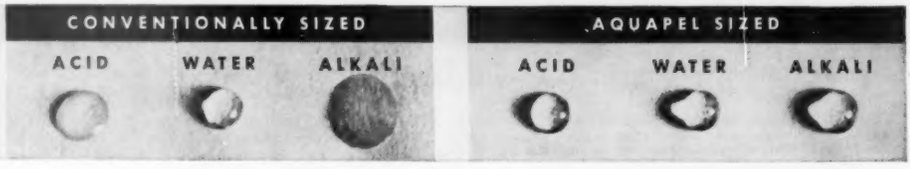
Applied on the surface, Aquapel is also a lot more than a surface size in the usual sense. Any equipment commonly used for the surface treatment of paper can be used to apply Aquapel. And it takes only a little Aquapel to make a big difference.

If you haven't tried Aquapel, write Hercules for a sample and descriptive literature.

Paper Makers Chemical Department
HERCULES POWDER COMPANY
INCORPORATED
965 King Street, Wilmington 99, Del.

PP56-2

AQUAPEL®
makes the difference



CHIPS DISSTON SAYS . . .
"Be a Sharp Buyer!"
1. Made of one solid piece of highest quality alloy steel.
3. Ground super-smooth on the knife face.
2. Ground super-sharp at the knife edge.
4. Specially heat-treated and tempered-hard and tough at the cutting edge; softer at slots to absorb shocks.
©HKP

Check these 6 BIG advantages you get with Disston Chip-Master Chipper Knives

Your nearby Disston distributor provides prompt service. Ask him today about Disston Chip-Master Chipper Knives.

1. **Uniform chips**
2. **Minimum bruising**
3. **Minimum sawdust**
4. **Long edge life**
5. **Fast re-sharpening**
6. **Low direct knife cost**

Henry DISSTON DIVISION
H. K. Porter Company, Inc.
391 Tacony, Philadelphia 35, Pa.

HKP DISSTON

STRICTLY PERSONAL

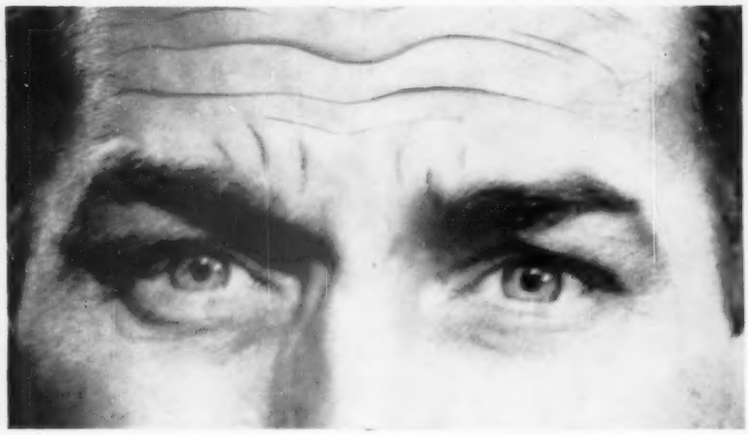
MORE SOUTHERN SIDELIGHTS

LIAM A. SIMPSON takes over as advertising manager, Bob's old position. . . .

Two groups from IP's Southern Kraft Div. Natchez mill recently hit the road visiting other IP mills in the South to get acquainted and familiarize themselves with operations elsewhere. **P. D. BUNKER, R. E. WEAVER, T. A. PUGH, A. W. LASSITER, J. Q. NUNNALLY** and **S. B. HOBBS** journeyed to Louisiana, Bastrop, Springhill and Camden; **M. L. BYARGEON, W. H. HOBBS, C. A. FERRILL, A. D. KOCK, J. D. RAYBORN, C. D. LOWE** and **FLOYD EDMISTON** visited Georgetown, Panama City, Mobile and Moss Point. . . . **HENRY SEEMAN,** supervisor of water and stream improvement at Champion's Carolina Div., is winner of a special citation from Power magazine for his timely report on water and stream improvement at Canton. "Water Re-Use Program" was his subject. . . . **GLENN ANDERS,** of Champion's Pasadena, Tex., mill, is one of two representatives from San Jacinto district who reports to the governor regarding Boy Scout activities in the area.

ALAN K. DAVIDSON, quality control engineer and **FELIX M. HAMMACK,** development engineer, Buckeye Cellulose, have been transferred from Perry, Fla., mill to Memphis. . . . **ROBERT J. DREXEL, JR.,** formerly with Edgar Div. of Minerals and Chemicals Corp. of America, now project chemist for Southern Clays, Inc., at Gordon, Ga. . . . **WILLIAM C. (BILL) HAYES** is new supt. of National Container's Valdosta mill. . . . **J. HOLLAND FOLKERTH** named vice president of the packaging division at Birmingham Paper Co. **JOHN CLEAGE, III,** becomes vice president in charge of production and **NORMAN ANDERTON** has been elected secretary-treasurer. . . .

BURDENED *with Dryer Felt problems?*



Brandon Sales can help you quickly

Avoid the worry and expense of needless downtime! Brandon's experienced staff gives you quick service, no matter when you need it.

Whether you need new felts . . . or services such as prestretching, and clipper seams . . . call your Brandon Sales representative. Brandon Makes All Three—Asbestos, Semi-Asbestos, Cotton.

For immediate attention to your dryer felt problems, write:

Brandon Sales, Inc.
Drawer L, Branwood Station
Greenville, South Carolina

Representatives:
Northern and New England States
Orton Corporation, Fitchburg, Mass.
Midwestern States
Frank Clawson, Kalamazoo, Mich.
West Coast
M. J. Maguire, Portland, Oregon
Southern States
R. S. (Bob) Davis, Greenville, S.C.

BRANDON DRYER FELTS

In News of Middle West

ALLEN ABRAMS (left), has retired as Vice Pres. in charge of Research of Marathon Corp. but continues as Director. He joined Marathon as Tech. Dir. in 1926. Was named "one of America's 10 top industrial chemists" by ACS of Chicago in 1947. See his interesting letter on a major industry problem—page 4, this issue.

JAMES BOYD (middle), Pres. of Manchester Machine Co., 807 W. Central Ave., Middletown, O., announces his firm will spend $200,000 on new tools and increase production of papermaking machinery by 50% in 1956. It will build a papermaking machine for a large eastern mill. Manchester's space will be more than doubled.

CHARLES W. SPRINGER (right), is new Director of Research and Development for Graver Tank & Mfg. Co., Inc. He has been Vice Pres. and headed Eastern sales for some years, including the digester and tank business in pulp and paper. He attended MIT and U. of Chicago.

Memoes from Middle West

GEORGE E. EPLEY is new acting resident mgr. of all St. Regis operations in Kalamazoo, paper mills and plastics plant. He had been administrative asst. to the mgr. Prior to that he was at the Trenton, N. J. Panelyte plant. **BYRON STEENBURGH JR.** is new paper mill supt. at Kalamazoo, transferring from Deferiet, N. Y. . . . **HERBERT W. HARKER,** 39, director of service operations, Kimberly-Clark, Neenah, Wis., died

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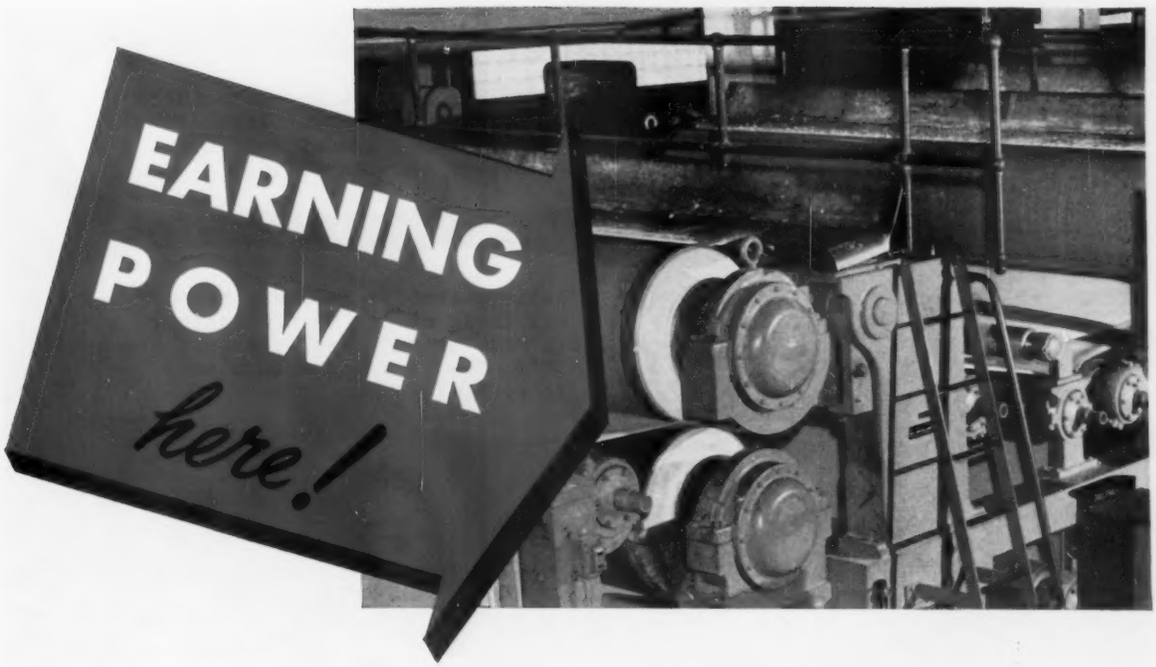


is the measure of rubber roll value...

The right rubber covered roll pays for itself so many times over in increased production that anything less than the right roll is exorbitantly expensive.

In the long run, the actual value of a rubber covered roll is measured in the production record of the machine in which it is installed . . . and on that basis, Stowe-Woodward rubber covered rolls are specified by America's leading papermakers.

Because of their dependability in production at high speeds, they have earned the name of

"RUBBER ROLLS with a REPUTATION"

S-W INC.

STOWE-WOODWARD, Inc.

Craftsmen in rubber rolls

NEENAH, WISCONSIN • NEWTON 64, MASS. • GRIFFIN, GEORGIA

Mr. Bohlin, can you expedite those three pulpstones on our last order? We are changing grades and need them sooner than expected.
I believe that we can, Mr. Whitney. I saw those stones in the factory this morning and they were well along so I'm sure we can get them out next week.
SERVICE AT HEADQUARTERS
. . . . long-experienced order personnel* to handle and expedite your orders; skilled engineering personnel to solve your special problems, not only in connection with Norton Pulpstones but also the many other Norton products for the pulp and paper industry.
Yes, you can be assured of genuinely helpful service, both in the field and at headquarters.
*This is Ralph H. Bohlin, pulpstone service specialist in the Worcester sales office, a member of the Norton organization for 14 years. Call him anytime at Worcester, PLeasant 2-4641.
NORTON COMPANY, WORCESTER 6, MASS.
Norton Company of Canada, Ltd., Hamilton, Ont.
NORTON
PULPSTONES

For makers of Quality Papers

This is a perfected bleached hardwood sulphate . . . made from carefully selected species of southern hardwood trees which yield the longest and finest hardwood fibre available. Astracel has the excellent forming qualities found in northern hardwoods . . . *plus great strength.*
It is produced at Riegel Carolina's new pulp mill at Acme, N. C., with every refinement and control known to modern pulp manufacture.

Riegel Carolina Pulps

ALBACEL • ASTRACEL

RIEGEL PAPER CORPORATION • 260 MADISON AVENUE • NEW YORK 16, N. Y.

STRICTLY PERSONAL

MORE MIDDLE WEST MEMOES recently. . . . **TOM HOOVER** is new supt. of industrial engineering for Kimberly-Clark, Neenah, succeeding **PAUL KRESS,** who is transferred to general offices staff in Neenah. Mr. Hoover, a Purdue graduate, has been working in research and development at the Niagara, Wis., mill. . . . **AL DEIBERT,** Munising, Mich., division of Kimberly-Clark, where he is instrument repairman, won the Upper Michigan Peninsula archery championship. . . .

To **WALTER H. (SWANNY) SWANSON** a proud property is the Silver Beaver award of the Boy Scouts, after serving 3 years as Fox River Valley Scouts council president. Vice president, research and development, Kimberly-Clark, he supervises the tech. dept., industrial engineering and patent depts., and mfg. process group for K-C. He graduated from Minnesota, received an ms. in forest by-products at Wisconsin. . . . **JOHN McPHERSON,** Mosinee Mills, and chairman of the Northwestern Supts., and associates are making plans for meetings Mar. 22 at Appleton, May 17 at Rhinelander and Sept. 21-22 at Wausau, Wis. . . . **PHILIP W. BUDD** is manager of a new sales service dept. at The Northwest Paper Co., including paper inspection, sampling, scheduling and field service. . . . **MARTIN GALBRAITH,** tech. director, Sutherland Paper Co., has been named a vice president. . . . **JOHN ST. MARTIN,** from accounting, Escanaba Paper Co. Escanaba, Mich., has been transferred to the accounting dept., The Mead Corp., Chillicothe, O.

The Gardner Board and Carton Co. has announced the promotion of **RICHARD MINGES** to the position of senior project engineer. He was born in Harrison, O., and attended the University of Cincinnati, Purdue, and U. S. Navy Midshipman School, Columbia, and served on destroyers during World War II. **WALTER BYRD** has been promoted to supervisor, cost analysis by Gardner, and **DONALD W. MALEY** to the position of assistant supervisor, industrial relations, at the Middletown operations.

Confirming reports carried by P & P, it is now official that **NICHOLAS BACHYNSKI** is new branch manager for Reliance Electric & Mfg. Co., Appleton, Wis., and **GEORGE E. LAW,** former manager, is now in Application Engineering Dept. at headquarters, Cleveland, O., as a specialist on motor drive applications for the paper industry. **ROBERT J. KINCAID** has been transferred from the Syracuse-Buffalo area to service engineer in Chicago and **ROBERT DUFF,** from headquarters service to the Buffalo-Syracuse area. . . .

ROBERT SIMKINS is new engineering dept. mgr., of Nekoosa-Edwards Paper Co. **CLARENCE WATSON,** who has held this position many years, became eligible for retirement and will continue in a staff capacity. Mr. Simkins was graduated from U. of Michigan in 1936. **GEORGE E. REYNOLDS** has been promoted to chief design engineer in engineering, Nekoosa-Edwards, according to **C. H. REESE,** vice president, manufacturing. . . .

ALVIN R. SINCLAIR has been appointed assistant director of paper chemicals application laboratory in Chicago for American Cyanamid Co.'s paper chemicals dept. He joined them in 1950 after serving as chemist with West Va. P&P Co. **J. L. DAVIS,** recently technical associate with the Inst. of Paper Chemistry, has been assigned to cover Western Wisconsin and Minnesota, formerly covered by Mr. Sinclair. Eastern Wisconsin and upper Michigan will be covered by **M. F. HEALY, JR.,** formerly with Brown Co., N. H. and Union Bag & Paper Corp. **J. F. HILLMAN** will handle Ill., Ind., Iowa, Kansas and Colo. He was formerly with Harbison-Walker Refractories.

Continued on page 22

"From ingot to fourdrinier wire"

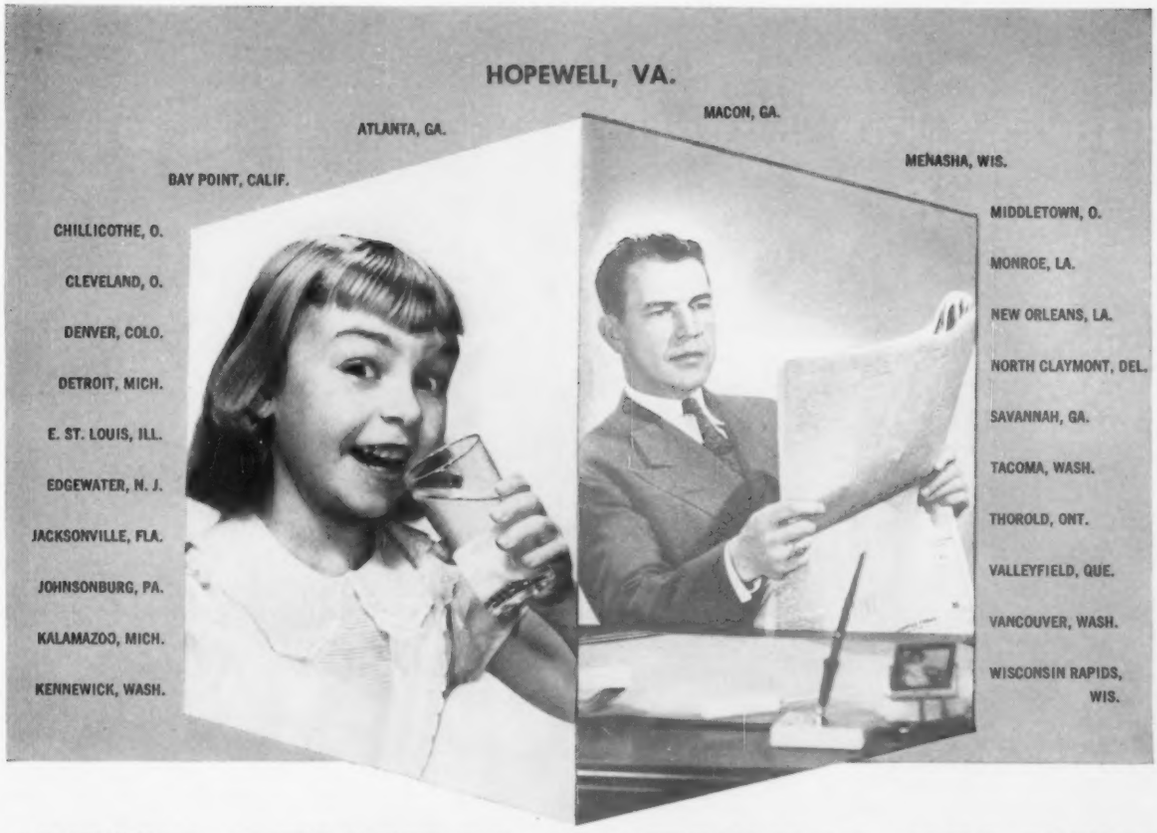
ANNEALING THE WIRES

Just as one alloy differs from another, so do their individual requirements for annealing vary. A definite ratio of speed and temperature must be used for each type. Skilled employees, tending our modern annealing furnaces, adhere faithfully to the proper speed-heat formulae so that your Eastwood wire will have the longest possible life.

Because the Eastwood-Nealley plant is a *completely integrated* one, every wire we ship has undergone thorough and continual analysis, control and testing from the raw metals to your finished fourdrinier wire ready for quality paper production.

We are proud to say they are *truly* ours—"from ingot to fourdrinier wire".

EASTWOOD-NEALLEY CORPORATION
Belleville, N. J.



MORE GENERAL CHEMICAL "ALUM"

for America's Paper and Water Industries!

Announcing a New Liquid Alum Plant at Hopewell, Va.

A 25th plant is now being added to General Chemical's coast-to-coast network of aluminum sulfate production centers! The new liquid alum plant at Hopewell, Va. will serve paper mills and water and sewage treatment plants in that part of the country . . . just as General's other facilities provide for needs of consumers near them.

Expansion That Assures Continued Good Service and Dependable Supplies

General Chemical dry and liquid aluminum sulfate has long been the first choice of industrial and municipal users everywhere. They have found they can always count on General Chemical for the right grades made to their requirements, with the same uniform high quality lot after lot.

And—*equally important*—they know that General's policy of building its plants at locations convenient to consuming centers means fast service and a reliable near-by source of supply they can depend upon in emergencies and at all times.

This is a combination that can't be beat. That is why it is *good business to do business with General* for alum or any of the other basic chemicals listed below.

GC Allied Chemical

Basic Chemicals For American Industry

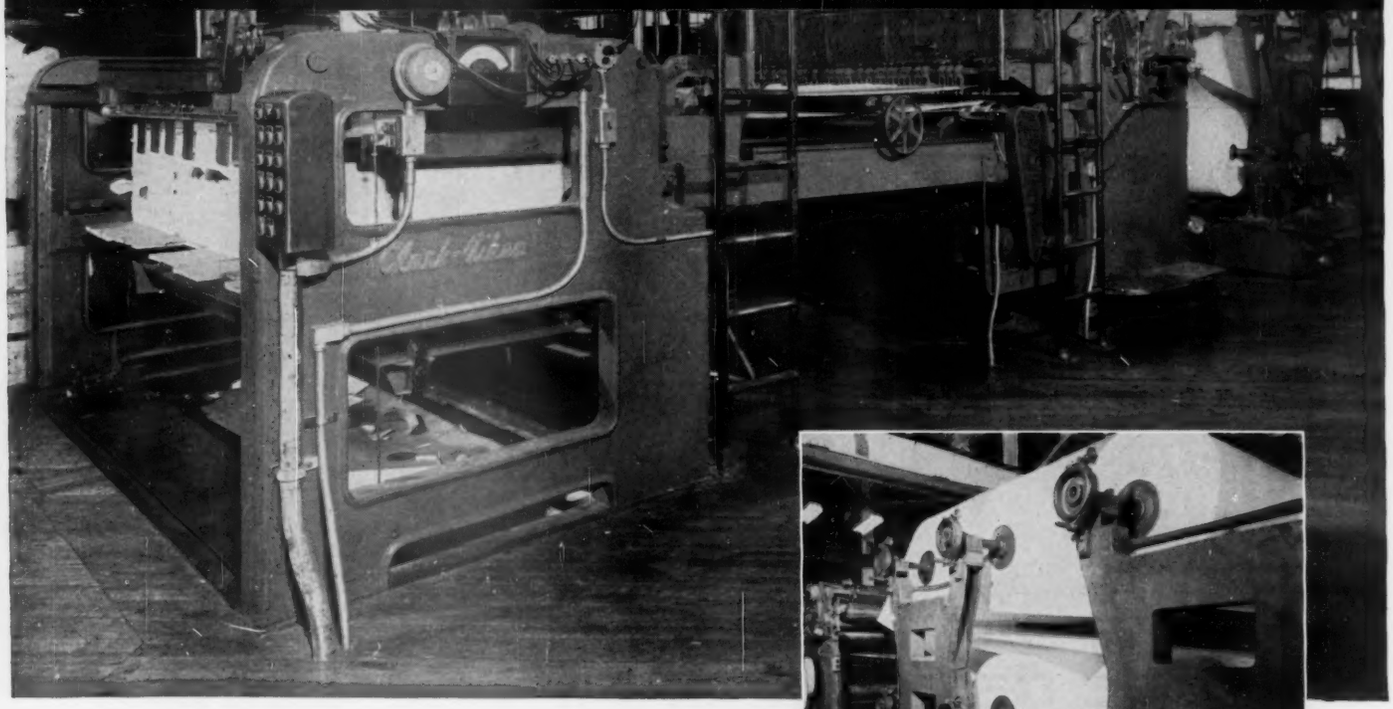
Acids	Phosphates
Alums	Sodium Compounds
Fluorine Compounds	Other Industrial Chemicals

GENERAL CHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

Offices: Albany • Atlanta • Baltimore • Birmingham • Boston • Bridgeport • Buffalo • Charlotte • Chicago • Cleveland Denver • Detroit • Greenville (Miss.) • Houston • Jacksonville • Kalamazoo • Los Angeles • Milwaukee • Minneapolis New York • Philadelphia • Pittsburgh • Providence • San Francisco • Seattle • St. Louis • Yakima (Wash.)

In Canada: The Nichols Chemical Company, Limited • Montreal • Toronto • Vancouver

2 Clark-Aiken Sheeters do the Work of 3...



in Hammermill's Modernization Program

Built with precision, strength and rigidity, completely-coordinated Clark-Aiken Cutter-Layboy Units operate at sustained high speeds with unvarying split-hair accuracy.

That is why, in modernizing its finishing room, Hammermill Paper Company, Erie, Pa., ordered only two Clark-Aiken Type C units to replace three older sheeters formerly used.

"Since we installed them in 1951," reports Mr. C. I. Colby, Installing Engineer at Hammermill, *"our Clark-Aiken units have never failed to keep pace with our sheeting requirements. With correct roll stands and continuous operation, we enjoy sustained high-speed sheeting with sustained accuracy and negligible broke, regardless of width of rolls. We also have more working space and can work more efficiently."*

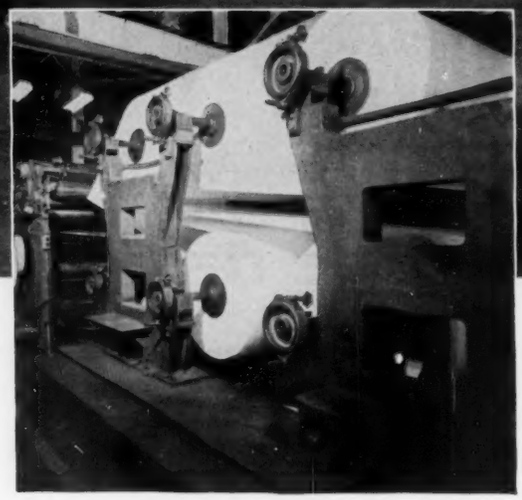
In addition, Hammermill enjoys the advantages of such Clark-Aiken "exclusives" as

Self-sharpening scissors-action "Spiral Shear" cylinder knife that insures clean, accurate cuts at all times.

Life-time non-stretch tapes that practically never need replacement.

Quick, accurate scale setting of slitters and joggers without use of tapes.

Clark-Aiken Cutters are made in four types with choice of conventional, overhanging or Vickery type layboy to exactly suit your requirements and operating conditions. Clark-Aiken engineers will gladly study your requirements and operating conditions and offer recommendations and estimates of economies they can make for you.



Clark-Aiken Turntable Type Roll Stands cut down-time for roll changes. Light-weight **Clark-Aiken Stub Arbors** save time . . . insure accurate roll alignment. Ask for bulletin.

THE Clark-Aiken COMPANY

957 SPRINGFIELD ROAD

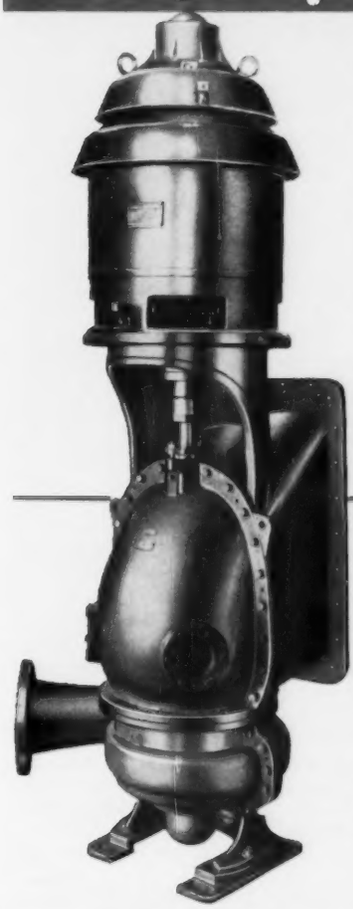
LEE, MASSACHUSETTS

THE

Bingham "PULP HOG"

FOR DECKER, WASHER OR THICKENER

A STOCK PUMP THAT CANNOT BE AIR-BOUND!



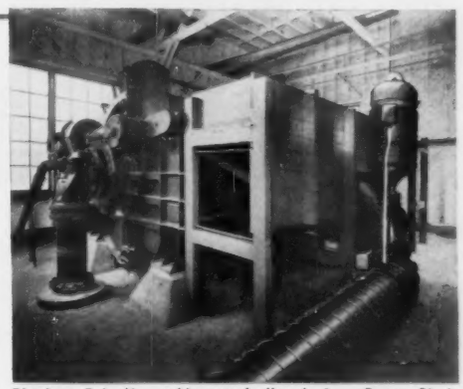
- HANDLES AIR-ENTRAINED PULP
- DISCHARGES PULP AT CONSTANT RATE
- UNINTERRUPTED FLOW INCREASES PRODUCTION
- RELIABLE PERFORMANCE UNDER ALL CONDITIONS

The *patented* Bingham Pulp Hog has been developed particularly for pumping stock containing large volumes of entrained air. This specially-designed pump takes stock from the doctor blades of Deckers, Washers, and Thickeners, and pumps it — without becoming air-bound or clogged — directly into mill system.

The Bingham Pulp Hog is characterized by a *large suction opening* and *non-clogging impeller of the top suction type. Impellers are specially designed to efficiently handle both high and low consistency stock.*

Bingham Pulp Hogs have records of *dependable performance* in major pulp and paper mills throughout the world. For more information call your nearest Bingham office or write for Bulletin No. 26.

- **Permits installation at convenient locations in mill flow line.**
- **Permits use of available floor space regardless of location of storage chest or other equipment.**
- **Operates successfully in basements or on any floor level.**
- **Eliminates need for dump chests.**
- **Substantially reduces building costs.**
- **Reduces operating heads, resulting in power savings.**



Bingham Pulp Hog taking stock directly from Doctor Blade of Washer. Weyerhaeuser Pulp Mill, Everett, Washington.

Bingham SINCE 1921

DOUBLE VOLUTE PUMPS RADIAL BALANCE

BINGHAM PUMP COMPANY

General Offices: **2800 N.W. Front Avenue, Portland 10, Oregon**

Factories: **Portland, Ore. • Vancouver, B.C., Canada**

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VANCOUVER, B.C., CAN.

STRICTLY PERSONAL

Flashes from Far West

RICHARD W. LOYST, assistant purchasing supervisor of CZ Port Angeles, Wash., became supervisor of mill purchases at Lebanon, Ore., replacing **ROBERT A. MYERS,** who transferred to Crown's larger West Linn, Ore., plant as assistant purchasing supervisor. . . . **CONRAD SPEIDEL,** former manager of publicity for Weyerhaeuser Timber Co., with offices in Tacoma, has joined Kaiser Aluminum & Chemical Corp., as Northwest manager of public relations, with headquarters at 505 Spokane & Eastern Bldg., Spokane, Wash. Last fall he met many Weyerhaeuser pulp buyers as he helped escort them on a tour of Northwest mills. He was with Weyerhaeuser 7 years, graduated from U. of Washington and served with Marines in Bougainville and Guam assaults. . . . **HOWARD EKHOLM,** son of **ERIK EKHOLM,** vice pres. of Puget Sound Pulp & Timber Co., has joined U. S. Air Corps. He had been working in the pulp division, Weyerhaeuser Timber Co., Longview, as project chemist. . . .

BEN S. SPAULDING, for past four years Pacific Coast representative of Emerson Mfg. Division, Co., Bolton & Sons, has joined E. D. Jones & Sons Co. as Pacific Coast representative. He maintains an office at his home, 12125 S. W. Greenwood, Beaverton, Ore. . . . **JAMES H. BEGLEY** is new western division sales mgr., industrial chemicals, Stauffer Chemical Co., announces **R. U. HASLANGER,** industrial sales director. Mr. Begley will base at San Francisco. He was with Stauffer 12 years, attended Notre Dame and Penn State. . . . **WILLIS (BILL) THOMPSON,** new safety supervisor for Simpson Paper Co., Everett, Wash., was born in the paper town of Wisconsin Rapids, Wis., but didn't get into paper there—he was raised in Mason City, Ia., and attended Wisconsin U. and George Williams College. . . . **DR. WALTER F. HOLZER,** tech asst. to Crown Z's mfg. vice president, **REED HUNT,** was named vice chairman of an advisory council for the U. of California's Forest Products Laboratory. . . . American Cyanamid's Paper Chemicals Dept. is establishing a new sales area to cover all states from the Rocky Mountains to the Pacific Ocean. **R. E. SUMNER,** general manager of Industrial Chemicals Division, says **OWEN M. CORNELL** is regional manager, headquartered in Portland, Ore. He has been with American Cyanamid and predecessor companies since 1924. In

Continued on page 26

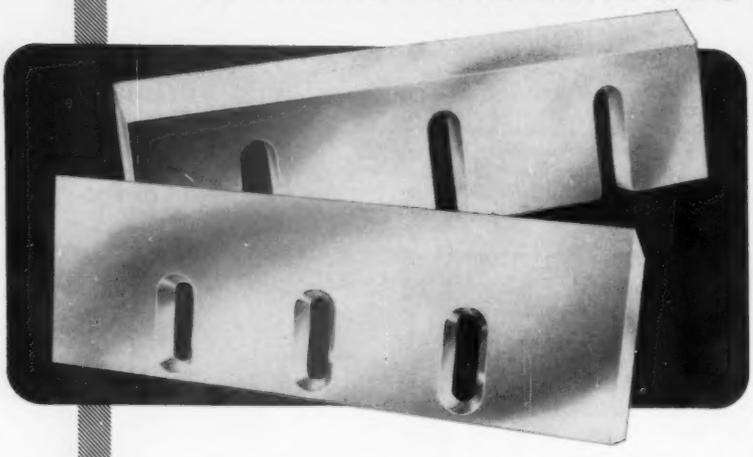
New Head for Bemis in West

L. A. LINVILLE (left), is new Director of Western Operations for Bemis Bro. Bag Co. with headquarters in San Francisco. He started in bag industry in 1930 in St. Helens, Ore., and was Manager of St. Helens plant of Jaite Co., later Bemis, 1934 to 1938, then of Bemis plant in Vancouver, Wash., and Asst. Director of Sales since early 1955.

ROBERT D. McAUSLAND (right), has retired as Vice Pres. and Director of Western Operations after 56 years with Bemis. He became Seattle Plant Mgr. in 1913, became a company Director, Coast Gen. Mgr. and was elected Vice Pres. in 1947.

B&B
TRADE MARK
REGISTERED

Symbol of *Quality* for MACHINE KNIVES



Hornet Chippers are always custom made of individually selected steels . . . scientifically heat treated . . . precision ground. Made by New England craftsmen of long experience, who have the know-how to produce knives that speed production, lessen waste and hold down-time for regrinding to a minimum. One trial will convince you.

B & B DIVISION

LODDING ENGINEERING CORP.

UNION • NEW HAMPSHIRE

(Aerial view Abitibi Mill, Smooth Rock Falls, Ontario)

MEAD GIVES YOU
THE **QUALITY** OF PULP YOU NEED

Mead has the quality pulps to fit your needs, whether chemical or mechanical, from hardwoods or soft woods, bleached or unbleached. These come from such a wide geographical range as Ontario, British Columbia, New Brunswick, Georgia, Tennessee, Maine and Wisconsin.

Abitibi Bleached Sulphite

Produced from the matchless characteristics of Canadian Black Swamp Spruce, for more than a quarter of a century Abitibi Bleached Sulphite has successfully answered the requirements of leading manufacturers of tissue, white papers and board. Outstanding for cleanliness, printability and strength, Abitibi Pulp is also known for its brightness, workability, and rapid development to maximum Mullen.

Tell us what *your* pulp requirements are, and we'll be glad to have our representative call at your convenience to tell you how we can best serve your needs.

MEAD PULP SALES, INC. • **Distributors of Wood Pulp**

BLEACHED AND UNBLEACHED CHEMICAL AND MECHANICAL WOOD PULP

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MEAD *pulp*

Outstanding water resistance... both wet and dry rub resistance... when you upgrade paper products with

SCRIPTITE* 54

Upgrade the water resistance of clay coating compositions containing casein, starch or synthetic polymeric binders by the addition of Scriptite 54.

Scriptite 54 coatings, which can be applied from aqueous systems, approach the water resistance, gloss and other properties given by solvent-type lacquers and coatings.

Papers treated with Scriptite 54 have *exceptional printability . . . superior ink absorption and varnish hold-up properties . . . improved folding endurance.*

For laboratory sample and technical bulletin, write to Monsanto Chemical Company, Plastics Division, Room 918, Springfield 2, Massachusetts.

MONSANTO

Monsanto's Line of Paper Resins also includes

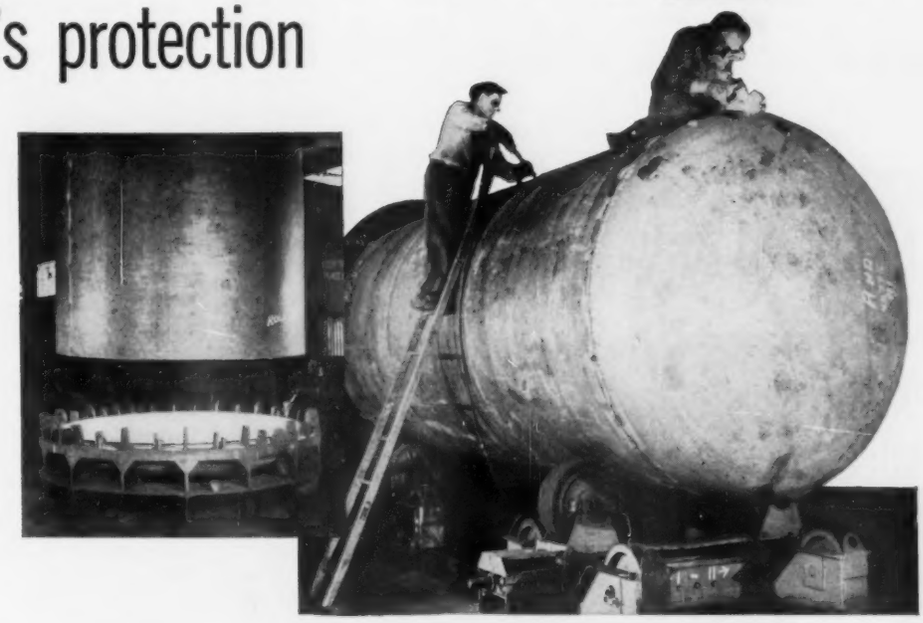
SCRIPTITE 50... *for unsurpassed printability and improved surface characteristics on boxboard.*

SCRIPTITE 52... *in combination with formaldehyde to give water resistance to folding boxboard and to jute liner.*

*SCRIPTITE: REG. U. S. PAT. OFF.

CF&I LECTRO-CLAD®

Nickel Plated Steel gives steel's economy plus nickel's protection



It's now possible to provide many products with low cost, sure protection against contamination and discoloration during processing, storage and transportation—thanks to CF&I LECTRO-CLAD Nickel Plated Steel!

For CF&I LECTRO-CLAD successfully combines the corrosion and contamination protection of nickel and the economy and strength of carbon steel. That's because this fully-proved product has a heavy layer of electrodeposited nickel that's 99% pure permanently bonded to the steel.

Ideally suited for heavy industrial applications where the rate of corrosion does not exceed 0.0015 inches per year, CF&I LECTRO-CLAD is customarily supplied with nickel plating in the 8-10 mil range; however, it can be plated up to 15-20 mils, if specified.

What's more, it's easy to fabricate. Just use regular shop equipment to bend it, weld it, roll it, etc.

CF&I LECTRO-CLAD Nickel Plated Steel is available in plates, sheets, pipe, fittings and heads. Be sure you see your nearby CF&I representative for the complete story on economical, effective, easy-to-fabricate CF&I LECTRO-CLAD Nickel Plated Steel. Or write Wickwire Spencer Steel Division, The Colorado Fuel and Iron Corporation, P.O. Box 1951, Wilmington, Delaware.

CF&I *Claymont Steel Products*

Products of Wickwire Spencer Steel Division • The Colorado Fuel and Iron Corporation

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STRICTLY PERSONAL

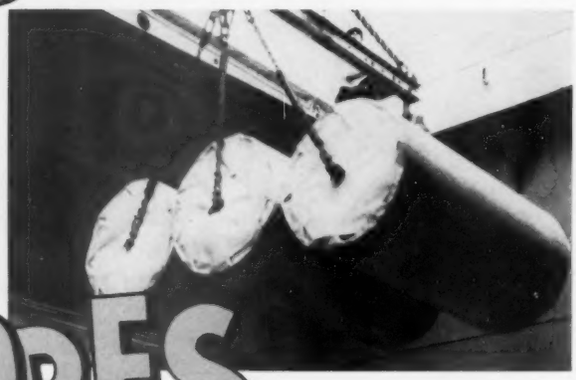
MORE FLASHES FROM WEST

1954 he transferred to the West Coast as district manager. . . .

KEN LOZIER, St. Regis v. p. for advertising and industrial relations, drew plaudits from a Graphic Arts audience at Seattle C. of C. luncheon meeting Jan. 13. He touched off Seattle's Printing Week with an address commemorating Ben Franklin's contribution to America. . . . A number of the St. Regis mill staff at Tacoma were on hand to hear Mr. Lozier, including **BOB De LONG,** timber manager; **JOE HALL,** bag factory manager; and **JIM KUSSMANN,** asst. res. mgr. who moved out from Kalamazoo in '54. . . . Recent floods in Cascade mountain streams did only minor damage to St. Regis logging facilities, Mr. De Long reports.

TOUGH

PAPER MILL AND SPECIALTY



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WITH OR WITHOUT METAL ENDS

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ECONOMICAL CARRIERS FOR —

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OR any paper that can be wound on a core!

DURO Returnable Cores, with 3" to 6" I.D. Bermico Metal Ends, are made to take abuse on high speed presses. Also made in any diameter and length without metal ends. Proven superior. RHINO non-returnable cores supplied in sizes to fit your needs. Specialty cores from ¼" I.D. up, and ½" to 24' long. Write for free descriptive core catalog at no obligation!

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DEPENDABLE SOURCE OF SUPPLY

Join Sandwell Engineers

Specialists who have joined Sandwell & Co., consulting engineers, in Vancouver, B.C. are RALPH DAVIS (left), who will concentrate on hydro-electric planning, and WILLIAM LEWIS CUNNINGHAM (right), who will work on process, operation and quality control in the pulp and newsprint industries. He was formerly with Coosa River Newsprint Co., Spruce Falls Power & Paper Co. and Powell River Co. Mr. Davis has served with the government and mining field.

Column from Canada

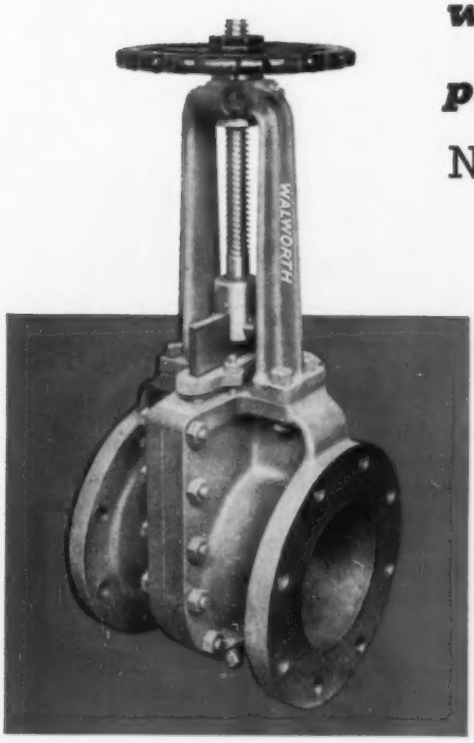
DON C. PORTER, manager of Long-Lac Pulp & Paper Co. mill, Kimberly-Clark subsidiary, since its startup, is new president of the North Shore Hockey League, which is comprised of teams in five towns in that area of Ontario. . . . **A. THOMAS EASLEY** is the new first resident mgr. for the North Western Pulp & Power Ltd. bleached kraft mill being built by St. Regis at the booming town of Hinton, Alta., 50 mi. northeast of Jasper Park. Mr. Easley has been acting mgr. of the three Northern N. Y. St. Regis mills, and before that was in personnel work. . . . PULP & PAPER's unofficial report last October that **A. C. (ACE) McCORRY** would move to Canada from Tacoma, Wash., to be mill supt. at Hinton, has now officially taken effect. This is his first move from Tacoma in 20 years. He came from Ontanogan, Mich. . . . It is also understood that **BEN HOY,** also from the Tacoma mill, will be the technical director at Hinton. He has had previous experience in Canada. . . .

ALLAN T. PATTON, born in London, England, is new vice president of Columbia Cellulose Co., Ltd., in charge of pulp sales. He joined Columbia in 1953. He was previously with woods dept. of Abitibi Paper Company, in sales promotion and pulp sales for Fraser Cos. in New York and Chicago, and with pulp sales for Mead, in New York, immediately before joining Columbia. . . . **J. KEITH EADIE,** former plant engineer at Alberni mill, MacMillan & Bloedel, has been named asst. mgr., and **D. B. LLOYD,** former special project engineer at Harmac, has been made tech. supervisor. **S. W. FORSTROM** is new plant

Continued on page 30

ASSURE *clogproof valve operation on stock lines with* **WALWORTH** *pulp stock valve*

No. 757F sizes 4" to 16" inclusive

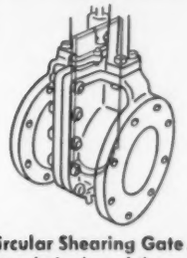


Clogproof operation makes this Walworth Gate Valve particularly suitable wherever pipelines transport pulp stock or other suspensions carrying solids or fibrous matter. There are no bonnet recesses or body obstructions to accumulate matter . . . circular ports permit full flow . . . semi-circular gate closes to a tight leakproof shutoff.

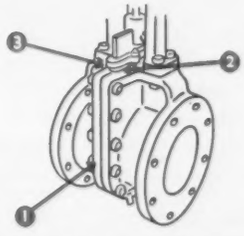
Suitable for a wide range of fluids and operating conditions, this unique valve design is available in All Bronze, Iron Body with Bronze Trim, Iron Body with Stainless Steel Trim, and All Stainless Steel construction. Handwheel, sliding-stem-and-lever, motor, and cylinder operation are available.

The complete Walworth line now includes valves and fittings for "across-the-board" use in pulp and paper mills. Gate, globe, angle, check and lubricated plug valves, as well as pipe fittings, in all conventional sizes and types. For additional technical data on the No. 757F — or any Walworth product — see your nearby Walworth Distributor or write:

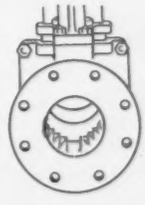
Check these features:



Semi-circular Shearing Gate... Sharpened, beveled edge of the gate shears through matter without touching inlet or outlet halves of the body. At point of closure a tight, leakproof shutoff occurs as the heel of the gate shearing edge wedges with a lug in the inlet half of the body. Ample gate length permits re-sharpening.



Bonnetless Design . . . 1) Two-piece body is bolted together and gasketed on a vertical centerline. 2) Stuffing box is an integral part of the body. 3) Packing and one-piece gland completely encompass gate.



Body Shearing Notches... Lower portion of the seat of the outlet half of the body is notched to better distribute the fibers of the pulp stock. This makes it easier for the gate to cut through fibrous material.

WALWORTH

Manufacturers since 1842

valves . . . pipe fittings . . . pipe wrenches

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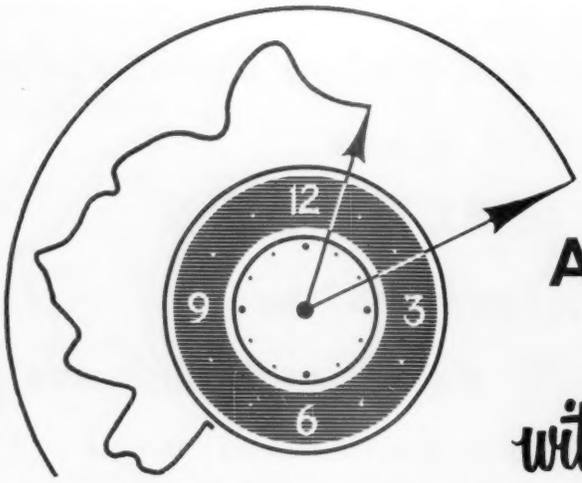
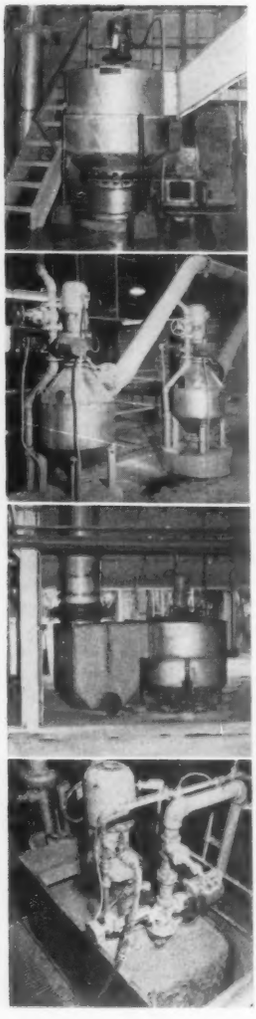
DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD



Consistency Control AROUND THE CLOCK with DeZURIK

AUTOMATIC - RECORDING CONSISTENCY REGULATORS



DeZURIK CONSISTENCY REGULATORS deliver a chart-record of every 24-hour operating period—a record that proves over and over that they continually hold consistencies within limits of plus or minus .1%; many DeZurik Regulators directly ahead of paper machines are holding consistencies to plus or minus .02%! And they do it without attention—without costly maintenance—under the most severe conditions!

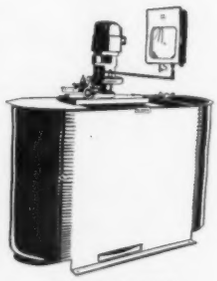
DeZurik Regulators employ a dynamic force balance system applied to a motor driven feeler agitator. An air impulse from the force transmitter passes to a two-pen controller-recorder instrument which adjusts the position of an air operated dilution valve installed ahead of the regulator.

Three basic types adapt to a wide variety of installations, such as regulating stock after high density pulp storage chests, after dry broke pulpers, couch pit wet broke control, brown stock washing systems, basis weight control, stock metering systems and refining systems.

Wherever quality control is essential, DeZurik Consistency Regulators provide dependable, accurate, automatic service.

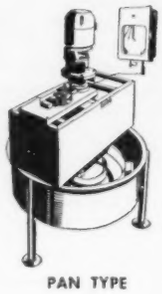
ALSO AVAILABLE: The DeZurik Closed Stock System for Paper Machine Supply—providing improved sheet formation, higher machine operating speed, elimination of air from the system, completely remote operation and other advantages in an engineered, low-cost package unit.

Write for complete information on DeZurik Consistency Regulators and on other mill-proved DeZurik products.



STUFF BOX TYPE

PIPE LINE TYPE

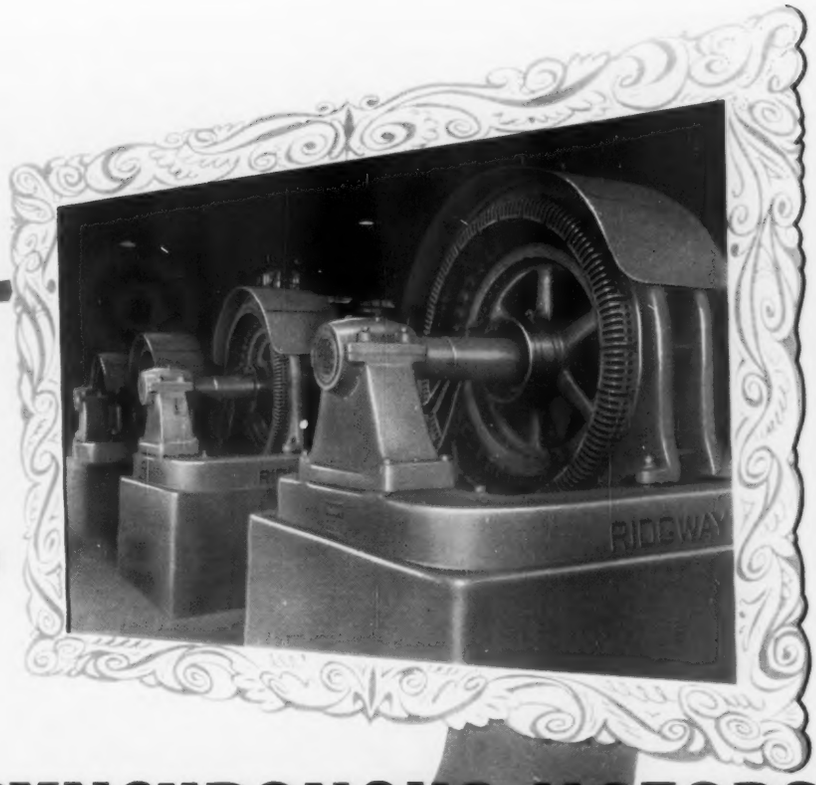


PAN TYPE

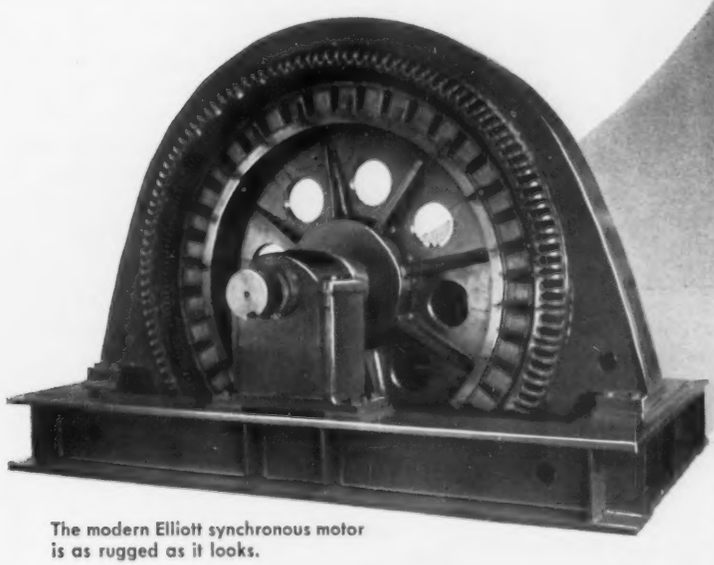
DeZURIK SHOWER CO.
Sartell, Minn.

30 years of progress

in large, heavy-duty synchronous motors



ELLIOTT SYNCHRONOUS MOTORS

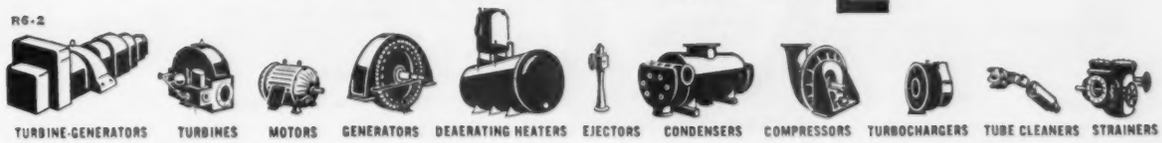


The modern Elliott synchronous motor is as rugged as it looks.

ELLIOTT Synchronous Motors have a long heritage. Many, like these four 650-hp, 180 rpm motors installed in a cement factory, back in 1924, have been serving continuously for many years and are still on the job! This background of experience, coupled with modern engineering materials and methods, has resulted in an exceptionally rugged and reliable Elliott synchronous motor today. The heavy, all-welded steel stator frame is strong, rigid and streamlined in appearance. Stator coils are given extra life with a mica wrapper or tape on the slot portion. Large-area starting-winding joints are silver-brazed for extra strength and high conductivity. Many other features help make Elliott synchronous motors first choice for rugged service such as ball mill, pulp grinder, wood chipper and metal rolling mill drives. Bulletin PB5000 gives full details. Write Elliott Company, Ridgway, Pa.

ELLIOTT Company

RG-2



TURBINE-GENERATORS TURBINES MOTORS GENERATORS DEAERATING HEATERS EJECTORS CONDENSERS COMPRESSORS TURBOCHARGERS TUBE CLEANERS STRAINERS

STRICTLY PERSONAL

MORE COLUMN FROM CANADA

engineer and **H. A. KELLEY** machine room supt. at Alberni. . . .

H. R. MacMILLAN has retired as chairman, MacMillan & Bloedel, being succeeded by **B. M. HOFFMEISTER**, former president. New president is **H. S. BERRYMAN**, who has been vice president, production. **R. M. SHAW** continues as vice president, sales, and **CLIFFORD CRISPIN**, vice president, pulp. Mr. MacMillan, now 70, said he felt that key executives should be in "the prime of life," but he retains chairmanship of the company's finance and policy committee.

HORACE F. WINCHELL, division mgr. in staff engineering, Scott Paper Co., Chester, Pa., has been named plant manager of Westminster Paper Co., New Westminster, B. C. He had been on a special assignment at the Canadian mill since September. He joined Scott in 1931 from Purdue U. He was named chief engineer at Chester plant in 1942. In 1947 he was sent to Harvard Business School. Named chief engineer at Westminster is **HENRY H. DERR** former plant engineer at Scott's South Glens Falls, N. Y., plant. . . .

Two families in the British Columbia forest industry were represented at a wedding in Florida when **MISS MARIE FOLEY**, daughter of **HAROLD S. FOLEY**, chairman, Powell River Co., became the bride of **BOB FILBERG, JR.**, son of **R. J. FILBERG**, president of Canadian Western Lumber, subsidiary of Crown Zellerbach Canada, Ltd. . . . **M. J. FOLEY**, president, headed Powell River's delegation to the Montreal convention, others being vice presidents **HARRY ANDREWS, W. C. R. JONES** and **ROY FOOTE**, Powell River Sales; **DON BLAKE**, research engineer, and **JAMES A. COCHRANE**, research supervisor, who delivered a paper on use of sodium sulfite at grinder showers. Crown Zellerbach Canada men who crossed the continent were: **FRANK YOUNGMAN**, chairman, **R. H. R. YOUNG**, vice president; **FRANK A. SCOTT**, manager sales; **R. GOURLAY**, and **J. N. HEAPS** of Ocean Falls staff, MacMillan & Bloedel was represented by **RALPH SHAW**, vice president, sales; **BILL LOCKE**, pulp gen. mgr.; **KEITH EADIE**, asst. mgr., Alberni pulp division, and **DON LLOYD** of Alberni. Also **WENTWORTH BROWN**, vice pres. and mgr., Columbia Cellulose, and Alaska Pine's **EUGENE DE LUCA.**

High note in EVAPORATING economy!

Get up to 6 pounds of vapor from 1 pound of steam with Swenson Septuple Effect Evaporators

Here's how to hit "high E" in evaporating economy! With seven Swenson Evaporator effects you boil off 5.7 to 6 pounds of vapor for every pound of steam that enters. You save fuel and steam plus condensing water as well, thus contributing to lower production costs per ton of pulp. If you presently use less than septuple evaporation, your existing evaporator equipment can be changed to septuple effect . . . with a gain in steam economy.

Get complete information on multi-stage evaporation economy. Write today for Bulletin E-100.

SWENSON EVAPORATOR COMPANY
15632 Lathrop Avenue, Harvey, Illinois

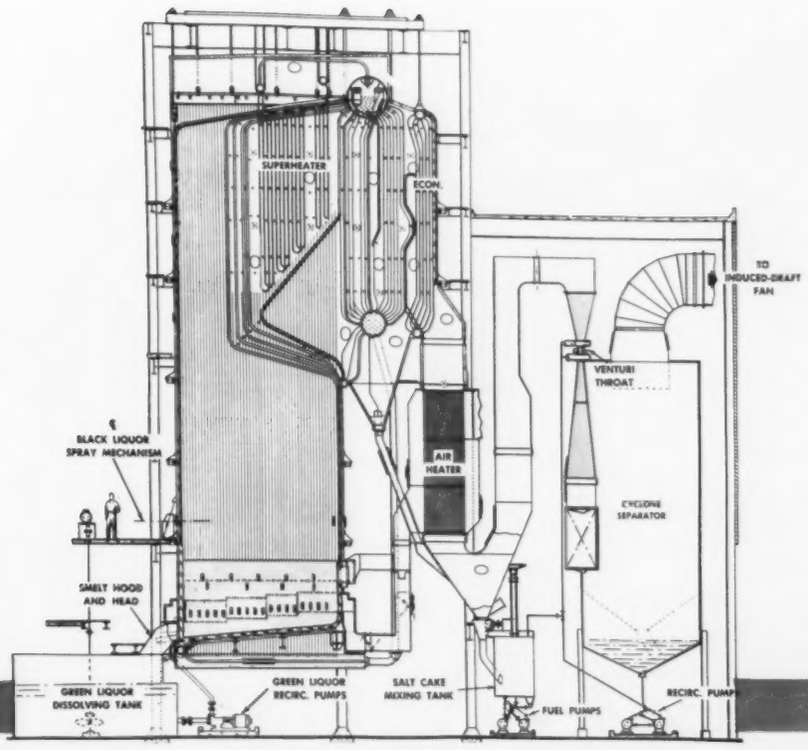
Multiple Effect Economy*

	QUINTUPLE	SEXTUPLE	SEPTUPLE
ONE POUND OF STEAM GIVES	3.7 to 3.9 pounds vapor	4.8 to 5 pounds vapor	5.7 to 6 pounds vapor

*Results will vary with feed and pressure conditions.

SWENSON
Proved Engineering for the Process Industries
SINCE 1889
A Division of WHITING Corporation

Pulp Washers • Evaporators
Filters • Digester Blow Condensers
Turpentine Condensers



Venturi Evaporator-Scrubber

(Contact Liquor Evaporator) (Fume Collector)

Installed with B&W Recovery Unit means Improved Economy

The Babcock & Wilcox Company black-liquor recovery system illustrated above has completed almost three years of continuous trouble-free operation.

An outstanding feature of this installation is the B&W Venturi Evaporator-Scrubber, which combines in one piece of equipment both the concentration of black-liquor and collection of salt cake fume. The two-year operating period has proved the Venturi Evaporator-Scrubber to be completely reliable and highly efficient.

Two recovery units equipped with Venturi Evaporator-Scrubber are now in service. Four additional units ranging in capacity from 117 to 300 pulp tons are currently on order.

The Venturi Evaporator-Scrubber is an important addition to B&W's equipment for black-liquor recovery. B&W can select exactly the right combination for your mill. The Babcock & Wilcox Co. Boiler Div., 161 E. 42nd St., N.Y.C.

Advantages of the B&W Venturi Evaporator-Scrubber unit include:

- Simplified Operation
- Low First Cost
- Increases overall Thermal Efficiency
- Efficient use of operating force
- Reduces Maintenance Requirements
- Continuous, High, Fume Collection Efficiency
- Minimum space requirement
- Reduces multiple effect evaporator load

BABCOCK & WILCOX

BOILER DIVISION

P-787-A

A $.95 SAVING
PER TON OF PAPER* with

Size Requirements (without Nalco 680) . . 30.25 lb.
Size Requirements (with Nalco 680) . . . . 21.60 lb.
Pounds of Size Saved . . . 8.65

Alum Requirements (without Nalco 680) . 40.00 lb.
Alum Requirements (with Nalco 680) . . 30.00 lb.
Pounds of Alum Saved . . . 10.00

Savings on Size (at 15.3 cents per lb.) . . $1.32
Savings on Alum (at 2.2 cents per lb.) . . .22
$1.54

Less Cost of Nalco 680 (at 10.7 cents per lb.) 59

TOTAL NET SAVING, per ton of paper $.95

Nalco #680
STABILIZED *Sodium Aluminate*

**Cutting size and alum requirements is only one advantage of Nalco 680 — the best, the most stable commercial grade sodium aluminate you can buy! Use it for higher pH and lower acidity!*

Don't confuse the production saving in this case history with a cutback in essentials. This mill makes fine writing paper, and quality is the number one requirement.

How Nalco 680 improved specifications while cutting the cost is obvious in the following: *Size test ratings jumped from a range of 45-50 up to 50-60. Ash content went from 5.6-5.8% to 7-7.1%.*

There are many, many other case histories of Nalco 680 success — power savings, greater alumina retention, cleaner machines, better products.

If you would like results like this in your mill, we suggest you check with your Nalco Representative. He has the facts on Nalco 680 applications and will help you all along the way.

NATIONAL ALUMINATE CORPORATION
6213 West 66th Place • Chicago 38, Illinois
CANADA: Alchem Limited, Burlington, Ontario
NORTHWESTERN UNITED STATES, HAWAII and ALASKA
The Flox Company, Inc., Minneapolis 3, Minnesota
ITALY: Nalco Italiana, S.p.A. SPAIN: Nalco Espanola, S.A.
WEST GERMANY: Deutsche Nalco-Chemie GmbH

THE *Nalco*® **SYSTEM...Serving the Paper Industry through Practical Applied Science**

King Sized Carelessness
WEYERHAEUSER
PULP DIVISION

1. From raw material to finished paper, Du Pont runs through the entire papermaking process to help determine the best procedures for its customers. Here the operator is charging unbeaten pulp into the beater, prior to paper preparation in the hand-sheet machine.

How Paper Problems Are Solved in the Du Pont Pigments Laboratory

An entire papermaking process can be duplicated at Du Pont's paper laboratory at Newport, Delaware. Here Du Pont technicians analyze every phase of the process—from beater to finished product.

This completely equipped paper laboratory is an important part of the technical service offered to paper manufacturers by the Pigments Department. In it are carried out essential evaluation tests to predict how white pigments will perform in the customers' plants; special studies of problems involving white pigments; continuous search for improved and more economical ways to use these pigments to make better papers.

In addition, the lab serves as an excellent training ground for Du Pont's field and sales personnel. Here they receive a thorough education in the use of white pigments in the manufacture of paper—experience which helps them to provide competent advice and information to customers.

How "Ti-Pure" titanium dioxide is used

"Ti-Pure," the Du Pont titanium dioxide, is an example of the white pigments evaluated at the lab. There time-tested pigments are added either at the beater or at the size press, calender stack or coater to make paper that will meet the requirements for higher whiteness, improved brightness and opacity.

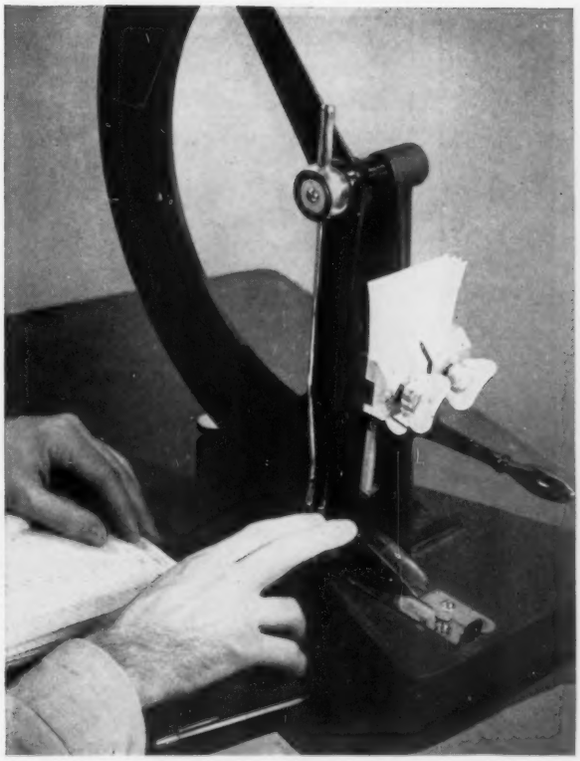
Du Pont "Ti-Pure" will run 97 to 98.5% dry brightness. It has the added advantages of good water dispersion, low coating viscosity, good beater retention and low adhesive demand.

As the manufacturer of "Ti-Pure" for over 20 years, Du Pont is ready to serve you with experience—both in the field and in our paper laboratory. For further information about "Ti-Pure" and Du Pont customer service, write:

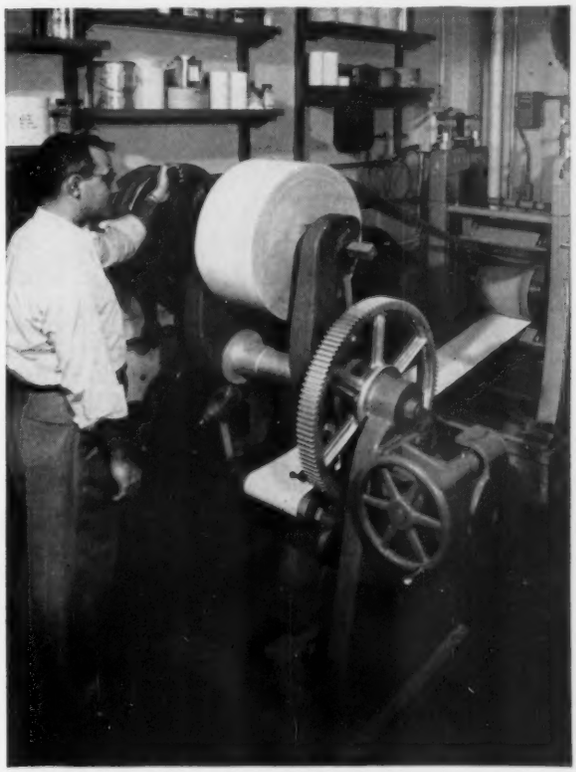
E. I. DU PONT DE NEMOURS & CO. (INC.)
Pigments Department, Wilmington 98, Delaware

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY



2. The tear test, one of the tests to measure the physical strength of paper, is useful in evaluating customer products.

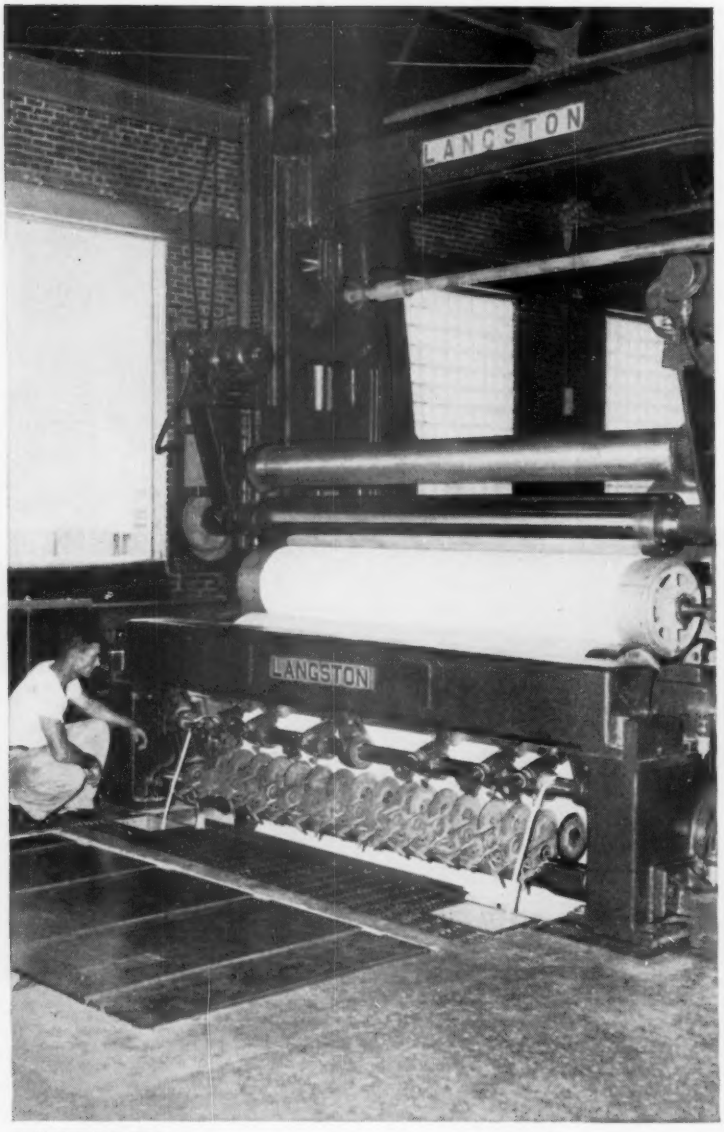


3. Effects of calender pressure and temperature on the gloss and printability of the customers' rolls of paper are studied on the laboratory supercalender, which is equipped with a take-off and rewind.

4. The end is only the beginning. The operator is supercalendering a hand sheet which will undergo many other tests for brightness, opacity and quality.

5. Brightness of paper is measured on a brightness meter.

6. Tests for stiffness of paperboard—one of the many rigid physical tests that end products of the paper laboratory undergo.



STARTING A ROLL. St. Regis operates this new machine at about 1000 feet per minute. During its first year's operation, the machine will slit and wind roughly *15,000 miles of board.*

Langston Slitter & Winder makes 26 perfect cuts per roll

LANGSTON SHEAR-CUT SLITTERS keep dust to a minimum. This means cleaner rolls; a cleaner plant; more accurate slitting; and square edges.

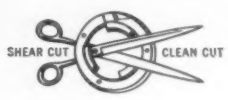
Performance report on new machine at St. Regis

"This new Langston winder makes money for us through better rolls and less waste." This remark was recently made by A. F. Downey, plant superintendent at the Pensacola, Fla., paper mill of St. Regis Paper Co. He was referring to the new Langston Slitter & Winder.

The machine's task is to slit heavy board used in the manufacture of milk cartons, butter cartons, paper cups, etc. Before installation of the machine, St. Regis had a major problem with checking and wrinkling—both of which created waste. Today they turn out as many as 26 cuts per roll—all perfect. "I think we could make 30 just as easily," said Mr. Downey.

The new Langston machine is a Model DH with 18-in.-dia. drums and idler rolls and other features specially built in to aid handling of the heavy board. Rolls slit and wound are 92 in. wide and of up to 72-in. dia. Operators praise the machine because it is so easy to operate.

Langston Slitters & Winders are available in several standard types, each adaptable to special applications. Sizes range from 40 to 196 in. and in speeds to meet your specifications. Write for complete details. SAMUEL M. LANGSTON CO., Camden 4, N.J.



LANGSTON *Leadership...by design*

How do New Huyck felts help you IMPROVE FINISH?

First . . . there are the many *new* felt designs and feltmaking techniques which so greatly improve finish characteristics.

Second . . . there's the *new* . . . Huyck-developed means of constructing yarns with *less tendency to mark* . . . fine enough to enter a needle's eye—yet sturdy enough to take plenty of abrasive wear and carry the load of a machine.

Next . . . *advanced engineering* has paved the way to *new* and revolutionary weaving processes which likewise contribute to *better finish.*

What do these *improvements* add up to? Just as an example, Board Mill Superintendents repeatedly tell us their *finish improves* when Huyck top felts are used.

Out of Huyck's continuing research and development are coming other *new ideas for improving finish.* Your Huyck Sales Engineer and Field Service Engineer will keep you posted.

Free!

Write today for your free copy of the new Huyck Felt Bulletin (Vol. II, No. 9), "The Effect of Paper Making Chemicals on Felt Life".

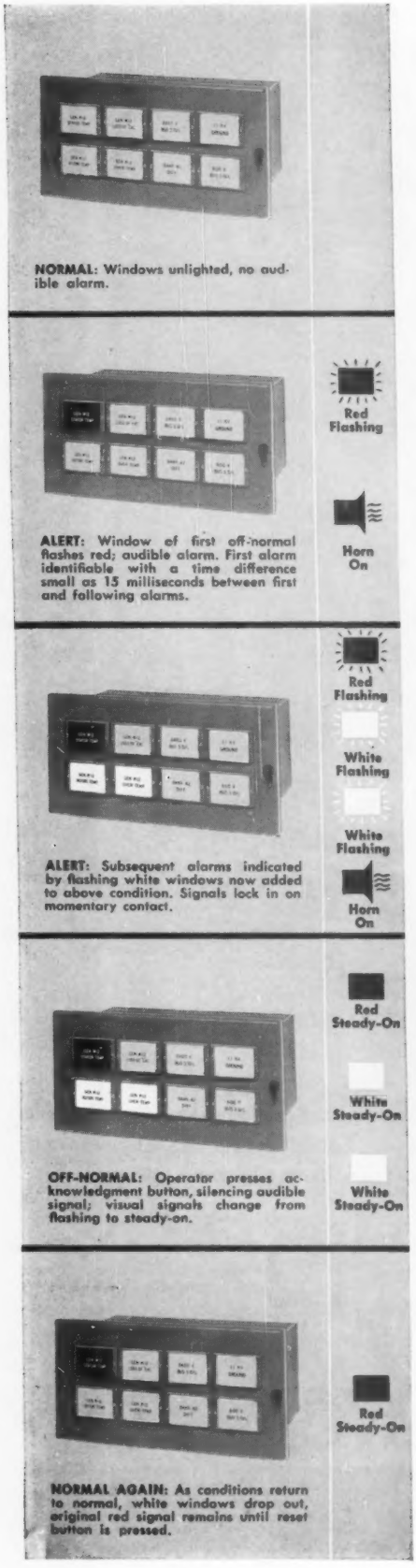
NEW!

HUYCK FELTS

FIRST IN QUALITY . . . FIRST IN SERVICE

KENWOOD TEXTILE PRODUCTS

F. C. HUYCK & SONS • Rensselaer, New York
Established 1870


NORMAL: Windows unlighted, no audible alarm.
Red Flashing
Horn On
ALERT: Window of first off-normal flashes red; audible alarm. First alarm identifiable with a time difference small as 15 milliseconds between first and following alarms.
Red Flashing
White Flashing
White Flashing
Horn On
ALERT: Subsequent alarms indicated by flashing white windows now added to above condition. Signals lock in on momentary contact.
Red Steady-On
White Steady-On
White Steady-On
OFF-NORMAL: Operator presses acknowledgment button, silencing audible signal; visual signals change from flashing to steady-on.
Red Steady-On
NORMAL AGAIN: As conditions return to normal, white windows drop out, original red signal remains until reset button is pressed.

Panalarm "VS" Annunciator identifies first off-normal from subsequent alarms for rapid corrective action

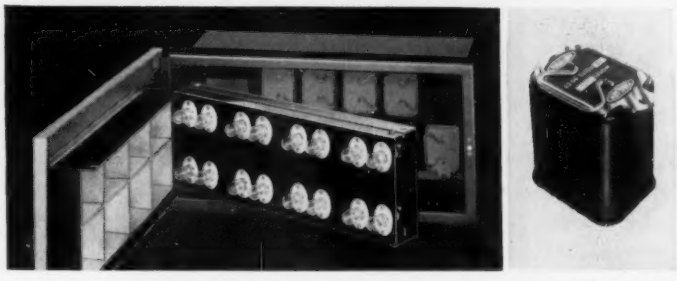
You gain the control advantages of an audio-visual information system, not just an alarm system, with the Panalarm "50VS" Visual Sequence Annunciator. This is particularly valuable when one off-normal condition will cause a "chain-reaction" of off-normals. Typical Panalarm applications are found in the process industries and among users of automatic machinery.

The original off-normal is clearly identified, enabling the operator to take immediate, corrective action. A considerable saving in down-time can often be effected simply by knowing the original source of trouble.

Panalarm "50VS" is completely flexible in setting up various sequential groups. Any number or combination of signals may be grouped as an independent sequence, and the groupings may be changed at any time by simple jumpers on the terminal block. Signals may be either illuminated nameplate or bullseye indicators, combined with a horn, bell or other audible signal. Signaling is simple and positive. A typical sequence is illustrated on the left.

Write for literature on the "50VS" and other Panalarm Annunciator Systems. A Panellit sales engineer will be happy to make a survey of your production operation to determine whether a Panalarm system can help increase efficiency and safety in your plant.

All Panalarm Annunciator Systems are completely modular, permitting future growth and changes. The photographs below illustrate a typical Panalarm Cabinet with illuminated nameplates and the hermetically sealed Panalarm "50" plug-in relay unit. Components throughout are ruggedly built to instrument standards for continuous, dependable duty. Entire Panalarm system is suitable for Class 1, Division 2 installations.

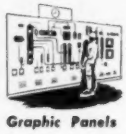


Listed by Underwriters' Laboratories

U.S. Patent No. Re-24,031

Engineered Information Systems for Industry

Panalog Information Systems



Graphic Panels Control Centers

Instrument Services Division

PANALARM

Division of

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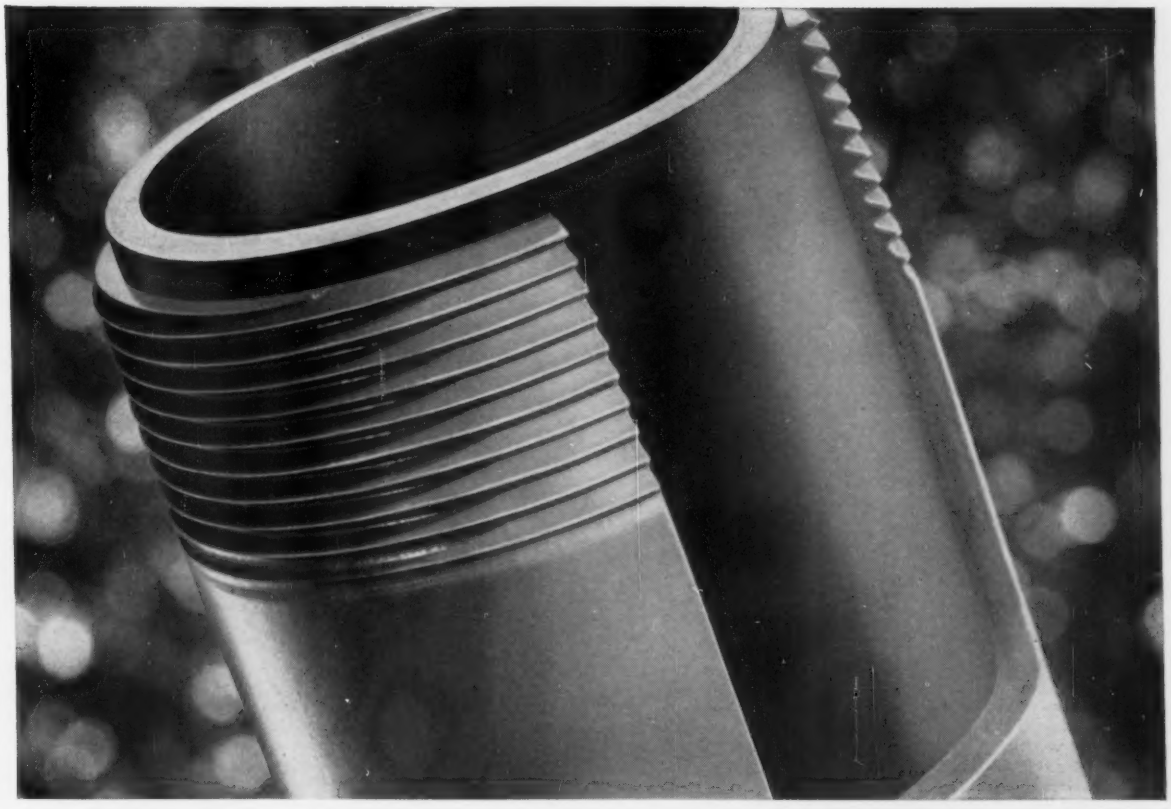
Panellit of Canada Ltd. Toronto 14

DOW



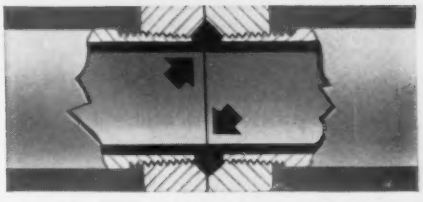
You can see why Saran Lined Pipe cuts corrosion costs

It's made of corrosion-resistant saran swaged into rigid non-bursting steel . . . liquid never touches metal in these installations

Here's your best way to convey acids, alkalies and other corrosive liquids—saran lined pipe, fittings and valves. This modern piping is corrosion resistant . . . forms snug, leakproof joints . . . is available for working pressures up to 150 psi. Fittings and valves are also available in steel for working pressures to 300 psi.

Installation costs are low with saran lined pipe, fittings and valves. Saran lined pipe can be cut and threaded in the field with available pipe-fitters' tools. Its rigidity means few supporting structures are needed.

Saran lined pipe has an outstanding record of trouble-free performance in the chemical, petroleum, waste, pulp and paper, metal finishing, and food processing industries. For further information send in the coupon at the right. THE DOW CHEMICAL COMPANY, Midland, Michigan.



Liquid never touches metal in saran lined pipe even at a flanged connection like this.

Saran Lined Pipe Company
2415 Burdette Avenue
Ferndale 20, Michigan
Dept. SP625E

Please send me information on saran lined pipe, valves and fittings.

Name_____ Title_____

Company_____

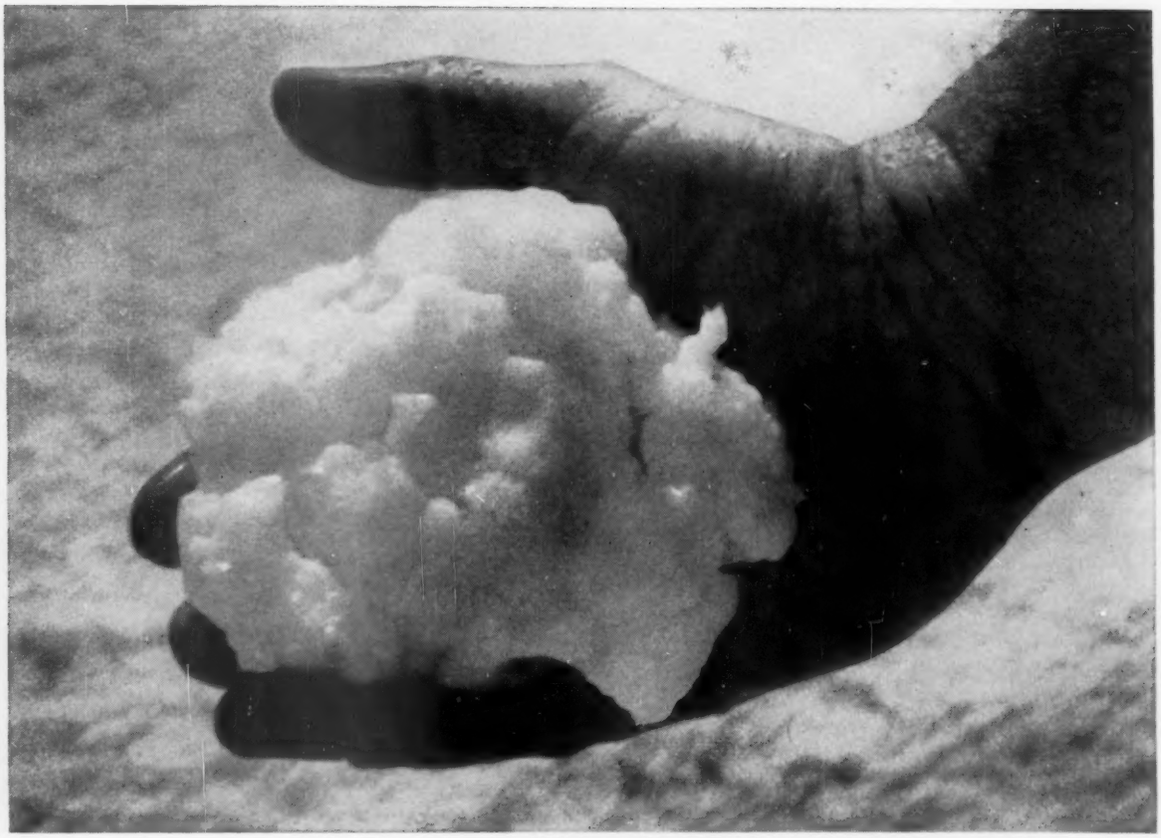
Address_____

City_____ State_____

Saran Lined Pipe is Manufactured by The Dow Chemical Company, Midland, Michigan

you can depend on DOW PLASTICS

DOW



Photograph of Western Hemlock pulp bleached snowwhite at world's largest specialty paper mill—The Camas Division, Crown-Zellerbach Corporation.

Partners in Pulp and Paper

Sodium Chlorate
Chlorine
Caustic Soda
Anhydrous Ammonia

TWO PENNSALT plants located in the Pacific Northwest make an important contribution to the pulp and paper industries and to many other users of basic chemicals. Nearby plants mean *economies* in transportation; *dependable* supply and *prompt* delivery; *reduction* of inventory requirements. PENNSALT quality controlled chemicals serve well the West, Canada and Alaska. *Write or telephone for Technical Service.*

PENNSYLVANIA SALT MANUFACTURING COMPANY OF WASHINGTON
TACOMA, WASHINGTON

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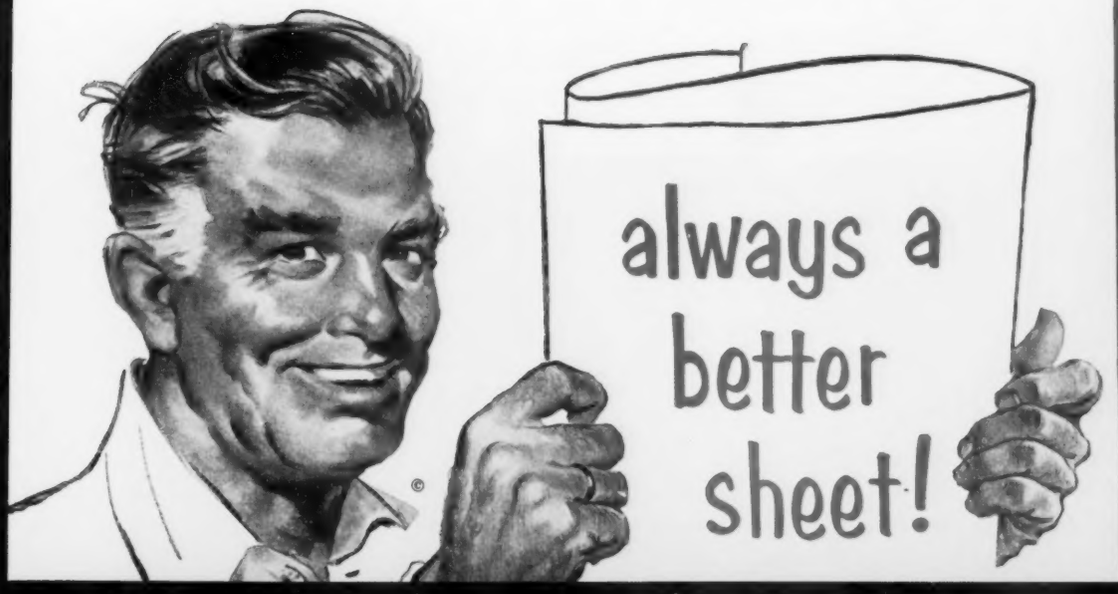
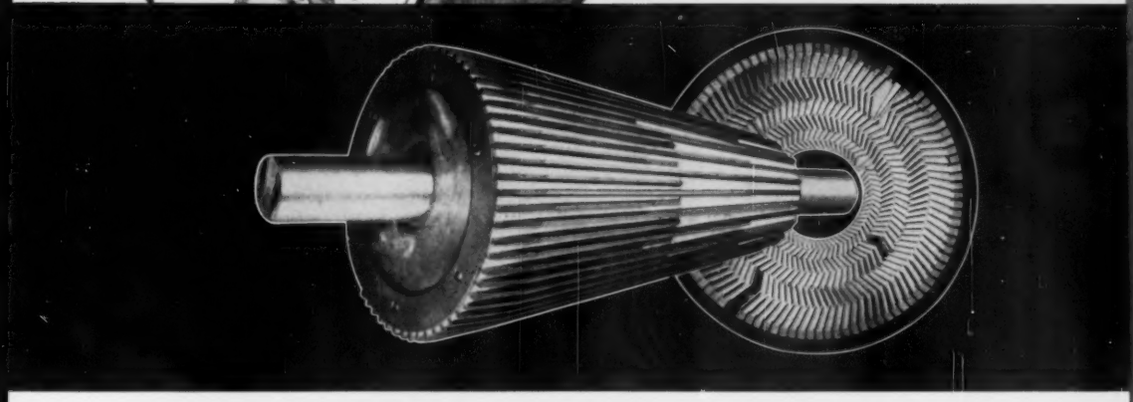
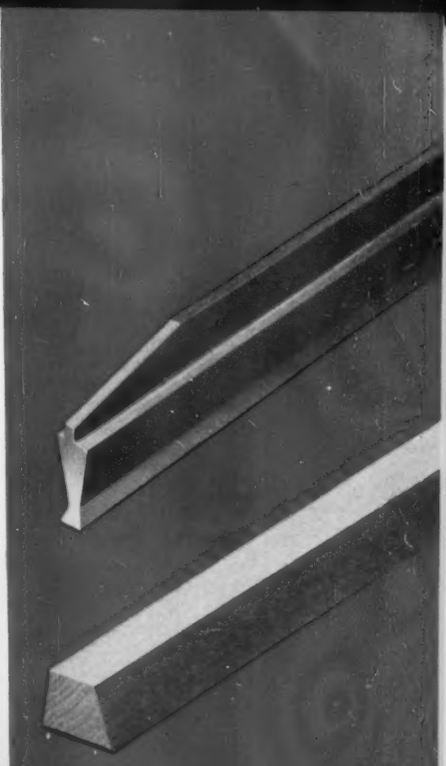
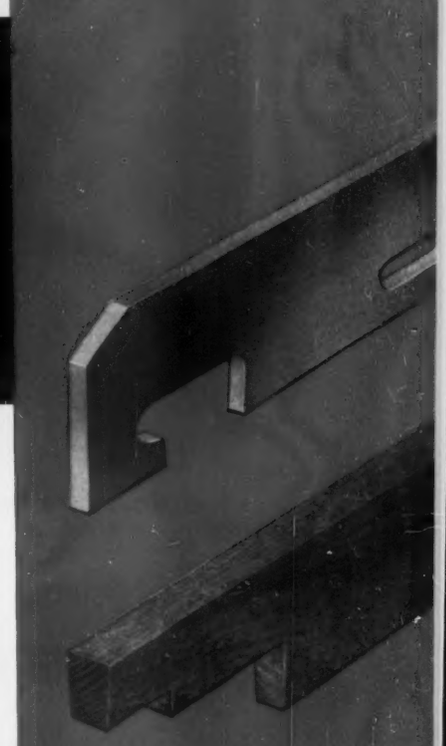
Pennsalt Chemicals

1850-1956









With BOLTON Jordan Fillings you get

perfect balance and straight line, even wear
for effective, uniform stock treatment.

BOLTON PLUG AND SHELL FILLINGS provide that "just right" combination. Made for ANY Jordan regardless of its *make, design* or *size,* BOLTON FILLINGS are results of many years of specialized experience in the fabrication of Jordan fillings, of extensive metals research and field testing, of precise, in-plant heat treating and rigid inspection at every step.

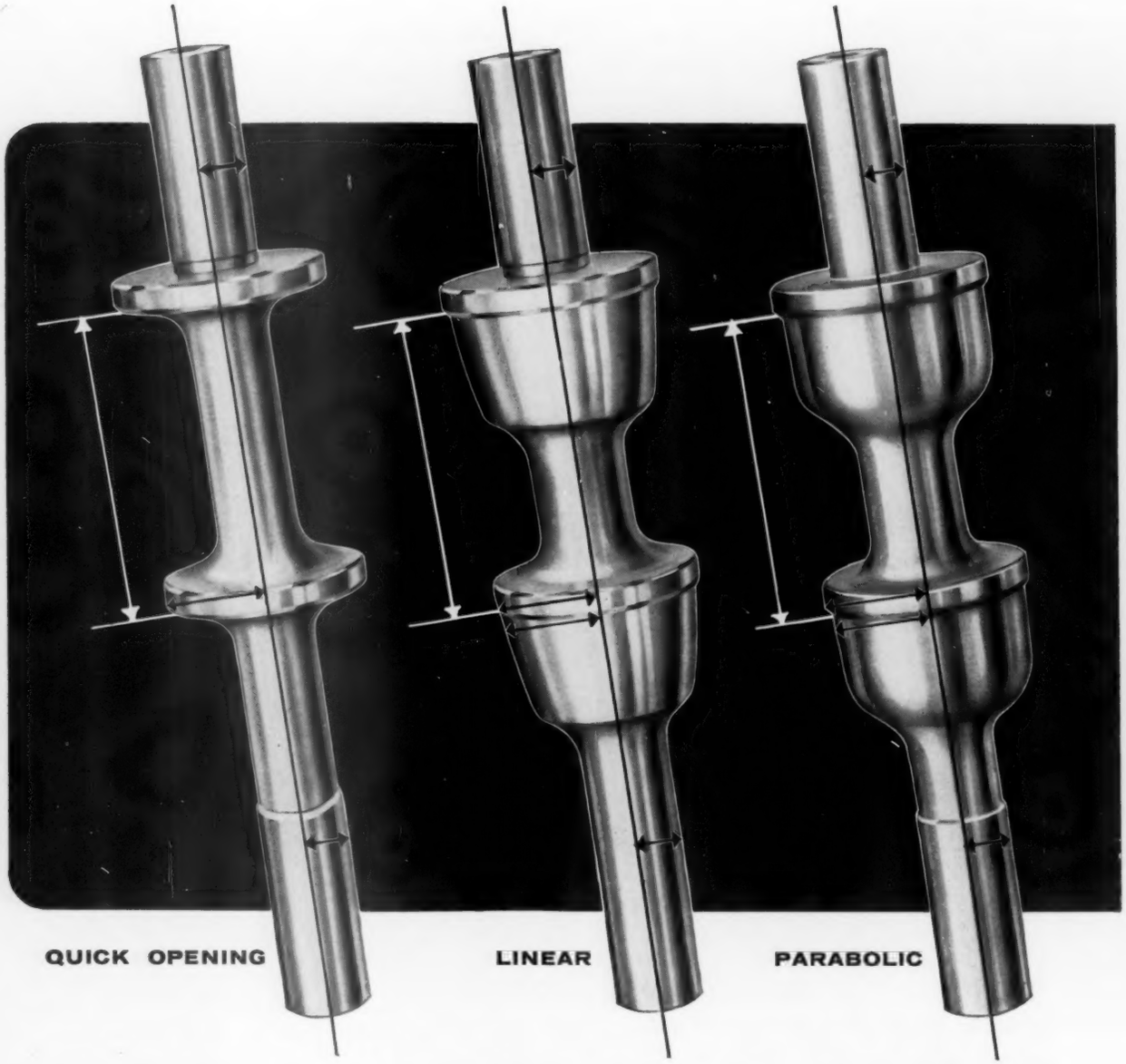
BOLTON TECHNICAL ADVISERS are always available for recommending the correct knife material and size for every refining requirement, for every type of furnish. They, too, will recommend the correct fillers — kiln-dried, straight grain, domestic or rugged South American hardwood, or the new BOLTON synthetic filler, known as RLY, for protection against abrasion and erosion.

Always for a Better Sheet it's vitally important to have the right equipment on the job. That's why it's wise to specify BOLTON PLUG FILLINGS and BOLTON HYDRO-TRUSS SHELL FILLINGS.

John W. BOLTON & Sons, Inc.
EMERSON MANUFACTURING DIVISION
Lawrence, Massachusetts, U. S. A.

Canadian Representatives: Pulp & Paper Mill Accessories, Ltd., Montreal, P.Q.

BOLTON EMERSON
TRADE MARK

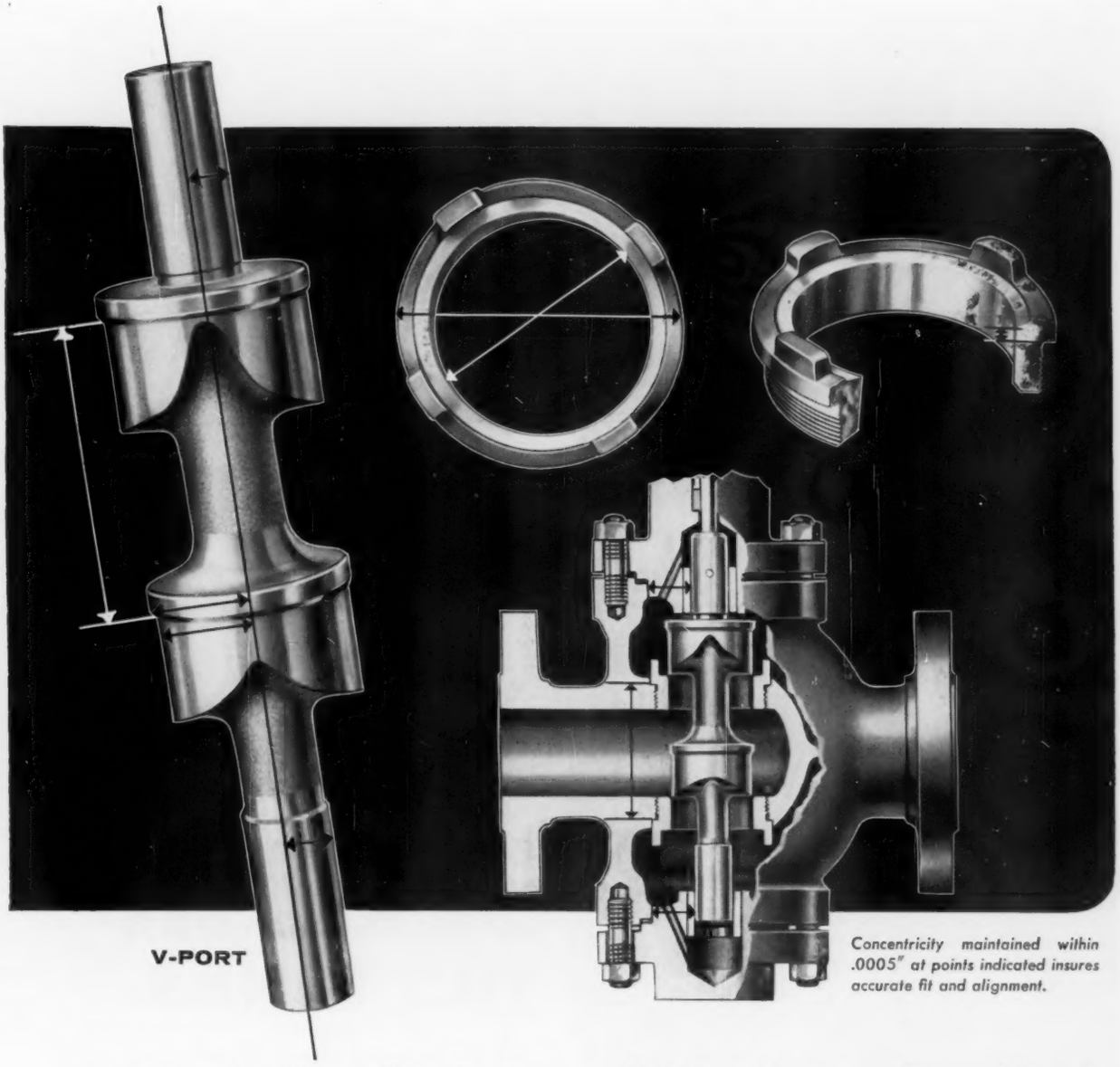


INTERCHANGEABLE PARTS

An Important Factor in Uniform Quality of Masoneilan Control Valves

You have a right to expect to be able to install replacement parts without recourse to a machine shop for custom fitting. When you use Masoneilan Control Valves you *get* parts that fit. For Mason-Neilan precision methods, automatic machines and specially designed tools and gages, plus rigorous inspection, eliminate the maintenance man's headaches and reduce costly time out of service.

By maintaining this precise uniformity, Mason-Neilan makes certain that every valve will be in perfect alignment and that any



V-PORT

Concentricity maintained within .0005" at points indicated insures accurate fit and alignment.

parts you may install later will also be in perfect alignment.

Moreover, because valve plugs of comparable size but different flow characteristics are interchangeable, conversion is a comparatively simple operation.

These quality features, added to other outstanding qualities of Masoneilan Control Valves, offer you low *cost* at comparable *price* — and over-all cost not price is the valid comparison.

Investigate the practical advantages of Masoneilan Control Valves. Write for complete data.

MASONEILAN

MASON-NEILAN REGULATOR CO.

1181 ADAMS STREET, BOSTON 24, MASS., U. S. A.

Sales Offices or Distributors in the Following Cities: New York • Syracuse • Chicago • St. Louis • Tulsa
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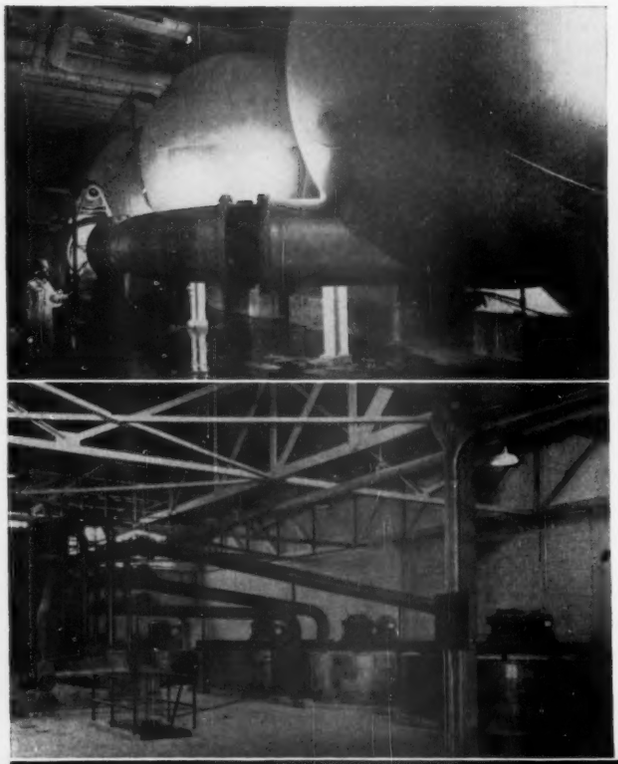
Stebbins research laboratory
and engineering offices.
Watertown, New York

RESEARCH and ENGINEERING have made Stebbins the World Leader



- **Designing**
- **Installing**
- **Maintaining**

Corrosion - Resistant

LININGS and TILE TANKS

The experience of practically all companies in the pulp and paper industry proves that it will pay you to put your corrosion-resistance problems in the hands of Stebbins specialists. Complete service, from original design to year-round maintenance. Get the facts.

Write for Bulletin A-153

SINCE 1884
Specialists in
Design
Installation
and Servicing
of Linings and
Tile Tanks

SEMCO

STEBBINS

Engineering and Manufacturing Company, Watertown, N. Y.

STEBBINS ENGINEERING CORP. — 1504 TOWER BLDG., SEATTLE, WASH.

CANADIAN STEBBINS ENGR. & MFG. CO., LTD. — CASTLE BLDG., MONTREAL, CANADA

If you are in PAPER...

...Look at A-C* Polyethylene

emulsions ***hot melts***

A-C POLYETHYLENE is "in" in the paper industry! Manufacturers and converters alike are using these unique polymers in both emulsions and hot melt applications.

Right now—
Paper makers are trying A-C POLYETHYLENE emulsions in the beater and as a pour-on at the calender stack.

Converters not only improve scuff resistance with it, get increased and retained gloss at higher temperatures, but thanks to A-C POLYETHYLENE-fortified coatings, they are coming up with outer wraps for frozen food cartons that seal, stay glossy, and resist cracking at low temperatures.

An interesting possibility—
By working together, paper makers and converters may upgrade sheets—prior to converting—with emulsifiable A-C POLYETHYLENE. Then, by altering the coating weight of the hot melt, new grades, new finishes, new papers might result.

On your sheet and *in* your sheet—
A-C POLYETHYLENE is easy to handle, easy to use on your present equipment. You can add it as an ingredient in your paper, apply it as a coating.

Test in your own plant—
If you are in any phase of paper—from pulp to the creation of functional packages—look at A-C POLYETHYLENE. When writing us for samples and technical literature, please specify your intended use. It helps us give you the proper information.

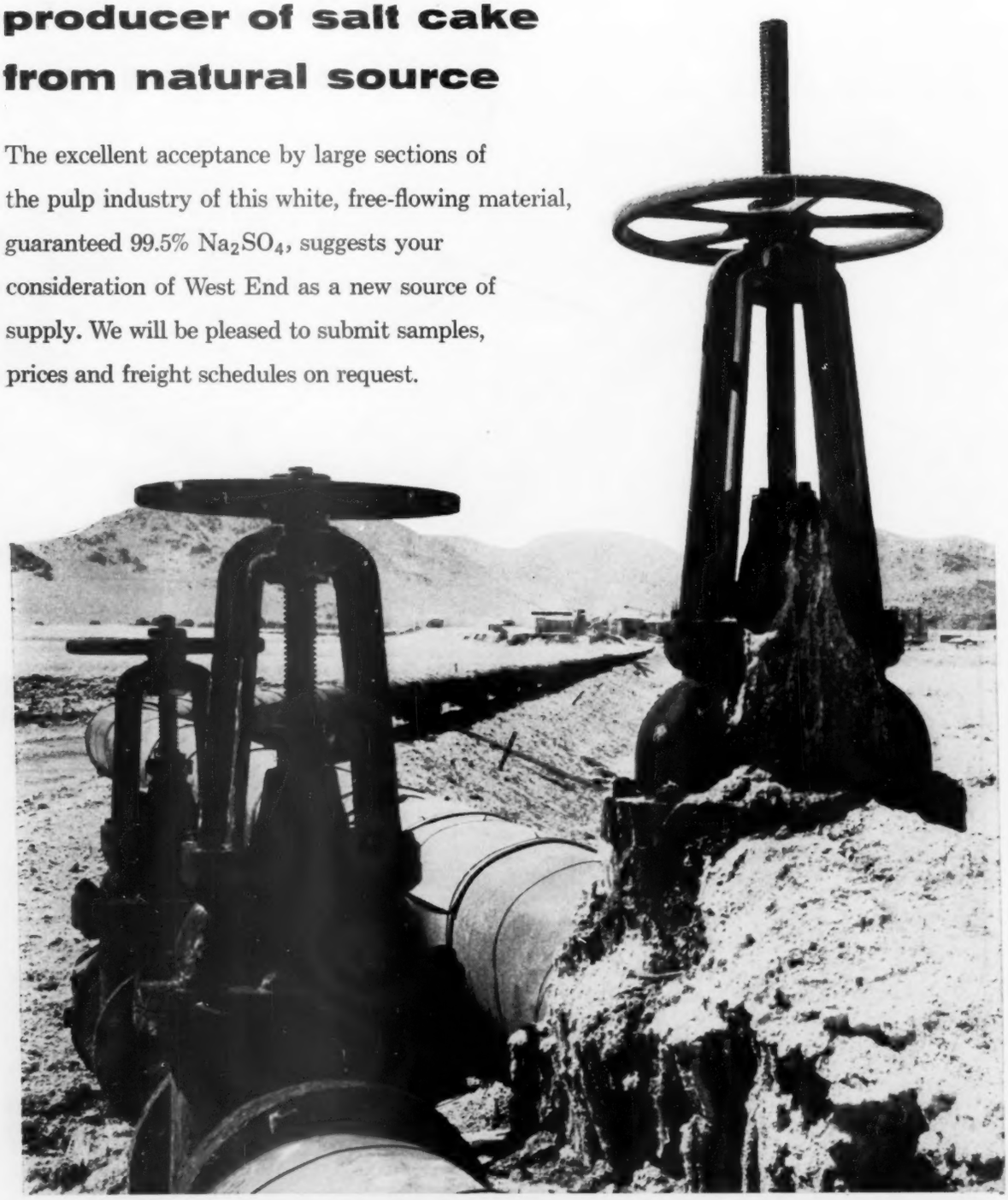
Allied Chemical

SEMET-SOLVAY PETROCHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
Room 5142, 40 Rector Street, New York 6, N. Y.
NEW YORK • CLEVELAND • CHICAGO

*Trade mark

West End . . . new producer of salt cake from natural source

The excellent acceptance by large sections of the pulp industry of this white, free-flowing material, guaranteed 99.5% Na_2SO_4, suggests your consideration of West End as a new source of supply. We will be pleased to submit samples, prices and freight schedules on request.



WEST END

West End Chemical Company

SODA ASH • BORAX • SODIUM SULFATE • SALT CAKE • HYDRATED LIME

EXECUTIVE OFFICES, 1956 WEBSTER, OAKLAND 12, CALIFORNIA • PLANT, WESTEND, CALIFORNIA

Thiele Kaolin

Water-washed, Spray Dried

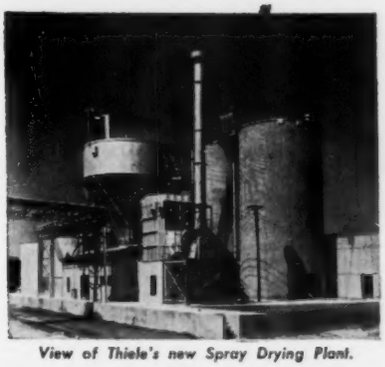
COATING CLAYS

are produced under strict quality control at each step of production. Exacting mine and laboratory tests assure the free-flowing, low viscosity characteristics so important in paper coatings.

Leading manufacturers of coated paper look to Thiele clays for:

- HIGH BRIGHTNESS
- UNIFORM LOW VISCOSITY
- CONTROLLED PARTICLE SIZE
- CONTROLLED MOISTURE CONTENT
- UNIFORM LOW SOLUBLE SALT CONTENT

UNLIMITED RESERVES

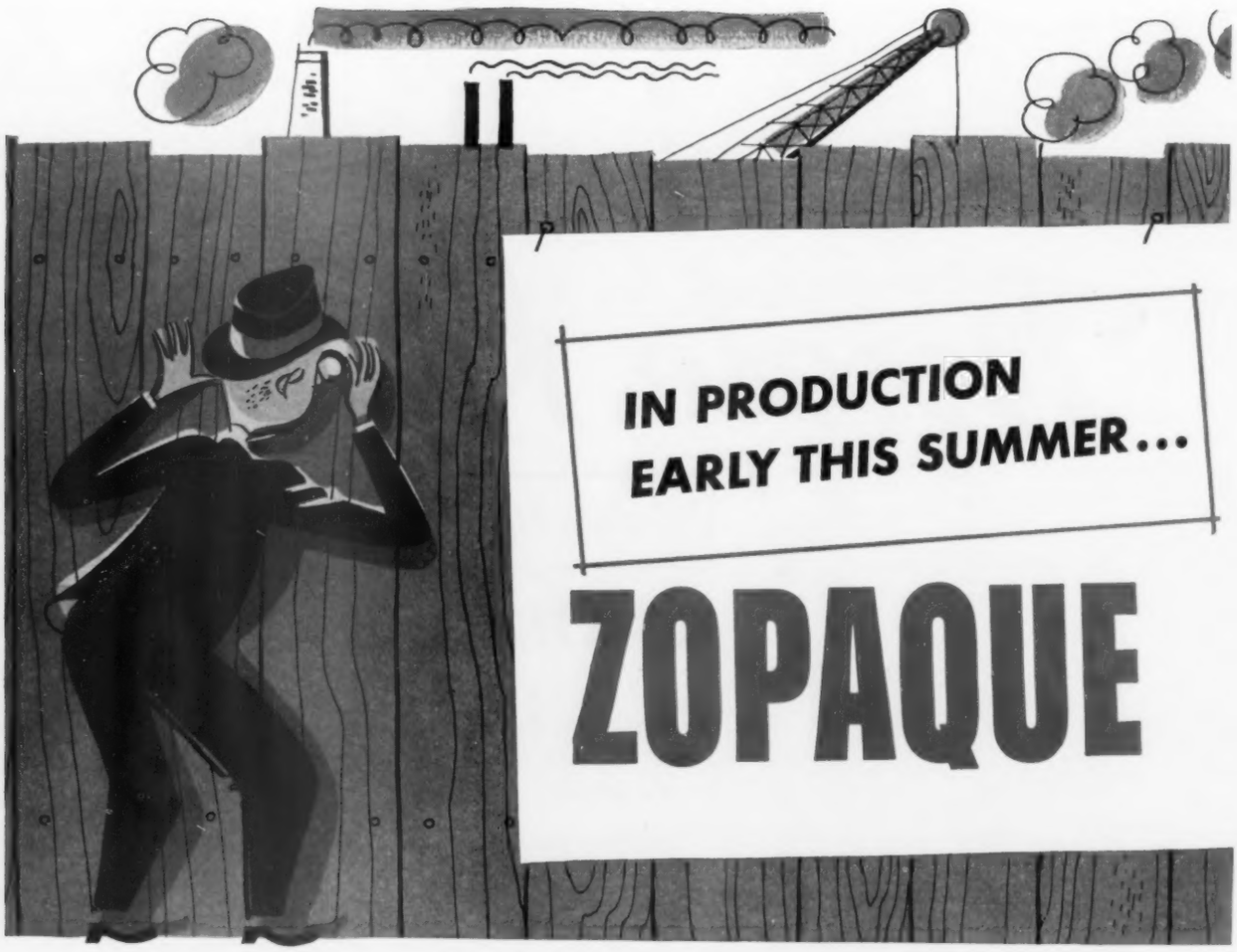


View of Thiele's new Spray Drying Plant.

Write for full information and sample of Thiele Coating or Filler Clay for your particular use.

Thiele Kaolin Company

P. O. BOX 270 • SANDERSVILLE, GA.



First of 3 Big Expansions

TO GIVE YOU BETTER SERVICE WITH NEW ZOPAQUE, THE FINEST TITANIUM DIOXIDE

Glidden research has achieved greater whiteness and a highly accelerated dispersion rate in the new ZOPAQUE. These developments produce pigments with maximum hiding power, outstanding gloss and color retention, and low reactivity. Early this summer, Glidden will open its new plant and double its production of ZOPAQUE. With this added production, Glidden will be in a better position than ever to serve your titanium dioxide needs.

Glidden ZOPAQUE Titanium Dioxide is available in both Rutile and Anatase grades. Rutile is recommended for the new types of paper coatings and Anatase is suitable for both coating and beater additions.

Write today for more details on Glidden ZOPAQUE, the finest titanium dioxide.

NEW GLIDDEN TITANIUM PLANT

Each Batch of Titanium Ore is Tested in Pilot Plant Before it is Processed!

You are looking at a giant titanium plant in miniature, as set up in the Glidden Laboratories in Baltimore. In this small-scale plant, jet-black titanium ore is transformed into gleaming white pigment through a hydrolysis process. This test provides an accurate check on every shipment of ore received by Glidden. It is part of the Glidden continuous quality control program to provide you with the finest ZOPAQUE Titanium Dioxide at all times.

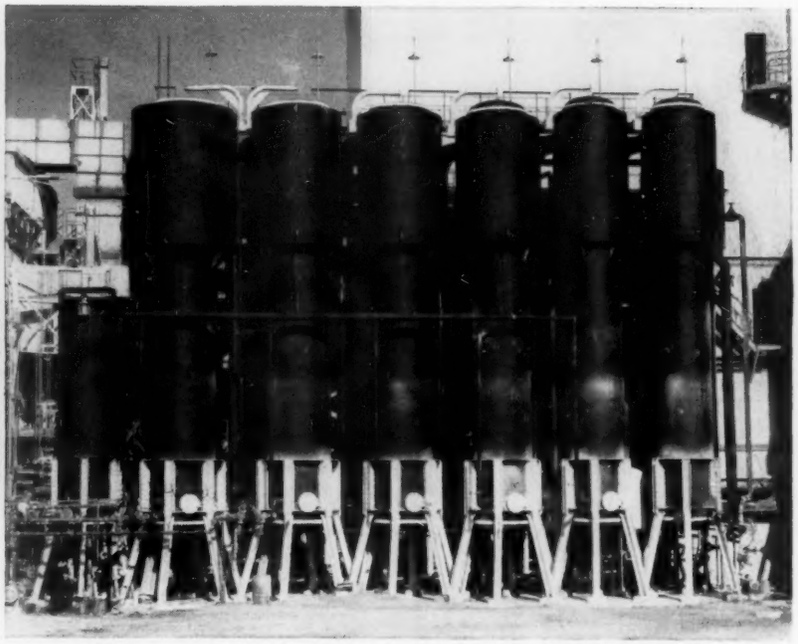
THE GLIDDEN COMPANY

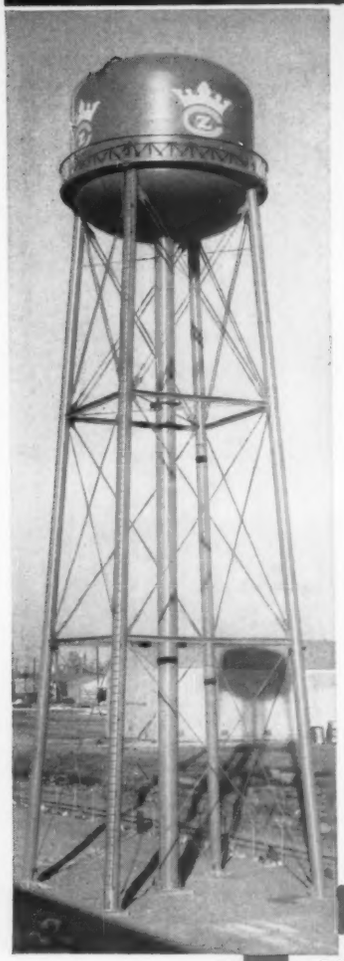
Chemicals — Pigments — Metals Division

Baltimore, Maryland • Cleveland, Ohio • Chicago, Illinois • Hammond, Indiana • Scranton, Pa.

QUALITY Glidden PRODUCTS

A Common Sight to be Seen in the Paper Industry





◀ Left: 100,000-gal. Horton elevated tank located at the Crown Zellerbach Paper Company, East Los Angeles, California.

▲ Above: Conkey six body sextuple effect black liquor evaporator with vertical surface condenser.

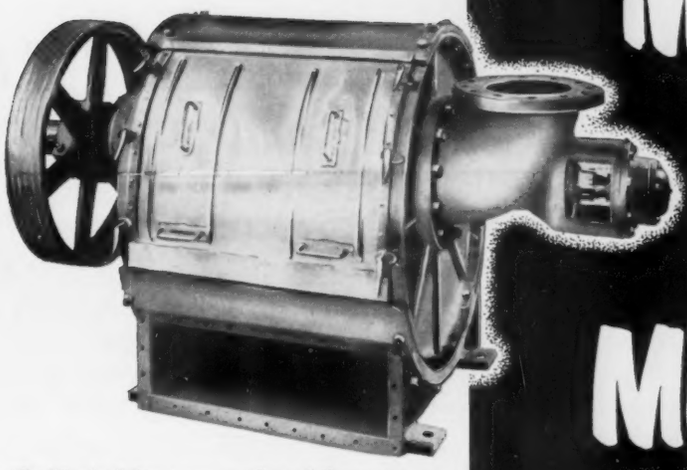
Increasingly, CB&I and Conkey equipment ARE sights that can be seen in the paper industry. Horton® elevated tanks, digesters and other welded steel plate structures and Conkey filters, evaporators and crystallizers are providing operators with the type of equipment that helps make profits.

Conkey and CB&I installations are becoming more numerous daily. CB&I's four strategically located plants are completely equipped to meet the most exacting specifications . . . including X-raying, stress-relieving and pickling and painting fabricated plates and shapes. Further information on either Conkey equipment or CB&I structures may be obtained by writing our nearest office.

CB&I

Chicago Bridge & Iron Company

Atlanta • Birmingham • Boston • Chicago • Cleveland • Detroit • Houston
Los Angeles • New York • Philadelphia • Pittsburgh • Salt Lake City
San Francisco • Seattle • Tulsa
Plants in BIRMINGHAM, CHICAGO, SALT LAKE CITY and GREENVILLE, PA.



The "Junior" Screen . . . smallest of *three* units producing from 35 to 150 tons per day, respectively.

Money Saving Midgets

Cowan Centrifugal Pulp Screens by

APPLETON MACHINE COMPANY

Added efficiency, greater economy are the watchwords for *Appleton Machine Company's* junior versions of the standard Mark "A" Cowan Centrifugal Pulp Screen, acknowledged as outstanding in its field.

The Mark "E" Screen is a half-sized model of the standard Mark "A", conservatively rated at a capacity of 2400 U.S.G.P.M. accepted stock. 50 h.p. is required to operate the Mark "E", but its drive is designed to accommodate a 60 h.p. motor, wherever needed. The Mark "E" is particularly advantageous in smaller mills, or as a supplementary screening unit. Also, installing two Mark "E" Screens—instead of a single larger machine—provides a definite safety factor in case of breakdown.

The "Junior" Screen is a quarter-sized model of the big Mark "A", with a rated capacity of 1400 U.S.G.P.M. accepted stock. 25 h.p. operates the "Junior" Screen, but it will handle motors up to 40 h.p. Greatest applications are as secondary screening units, and as a primary screen for mills producing a variety of pulp grades which require a system made up of small, separate units.

Performance of these two Cowan Screens is comparable in every way to that of the standard Mark "A" Screen . . . the same high consistency screening . . . low percent rejects . . . good fiber separation . . . low shower dilution pressure . . . top hydraulic efficiency. Typically sound *Appleton Machine* construction plus a protective coating tailored to fit your needs *complete* your assurance of long-time satisfaction.

A
APPLETON MACHINE COMPANY
APPLETON
WISCONSIN

CUSTOM-BUILDERS OF PULP & PAPER MILL MACHINES
WINDERS • FINISHING ROLLS • REWINDERS

SELF-DOCTORING TOPRESS ROLLS

rubber covered *by* GRIFFITH OF PORTLAND

THE MOST ADVANCED DEVELOPMENT IN RESILIENT ROLL COVERINGS SINCE THE INTRODUCTION OF RUBBER COVERED SUCTION ROLLS

The Self-Doctoring Topress rolls covered by GRIFFITH will not pick the sheet because a special improved rubber cover compound is used. Breaks in the sheet contacting the Topress Rolls are eliminated. Doctor Blades may be entirely removed from the machine—or their use discontinued.

With the installation of GRIFFITH Self-Doctoring Topress Rolls on an open top press, you gain the advantage of resilient rolls of the hardness required for best operation. This gives better water removal at higher speeds, plus much longer felt life.

Three GRIFFITH covered S.D.T. Rolls are used on Weyerhaeuser Timber Company's 400-ton-per-day machine at Springfield, Oregon, running at 1,200 ft. per minute.

SECOND & THIRD PRESSES— GRIFFITH covered Self-Doctoring Topress Rolls with Doctor Blades and Holders permanently removed from machine.

FIRST PRESS — GRIFFITH covered Self-Doctoring Topress Roll with Doctor Blade off the roll.

WRITE, WIRE OR TELEPHONE FOR AN ESTIMATE ON YOUR JOB

Griffith RUBBER MILLS

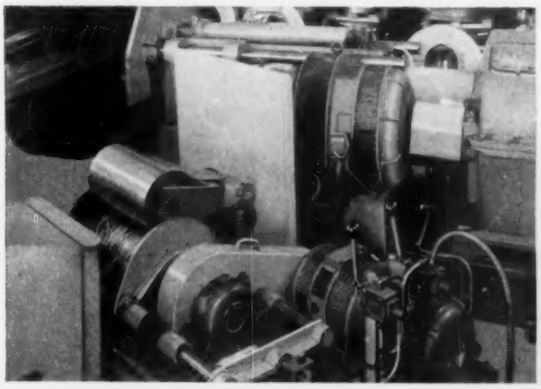
2439 N. W. 22nd AVENUE
***PHONE:* CAPITOL 3-7126**
PORTLAND, OREGON

RUBBER ROLL SPECIALISTS SINCE 1911

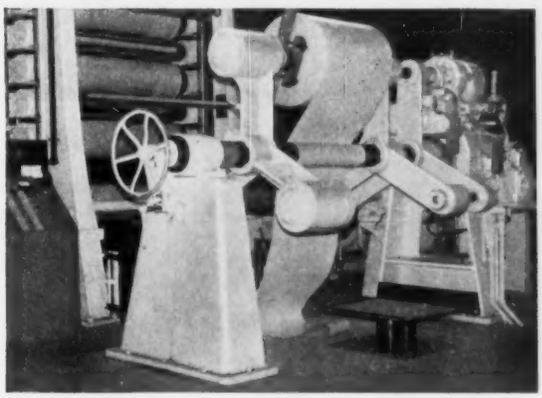
Tension Control Problems?

Dynamatic's Long Experience in Solving Industrial Windup and Unwind Problems will be Valuable to You

DYNAMATIC®



Metal slitter powered by Dynamatic Drives. Adjustable speed liquid cooled coupling used as main drive; Ajusto-Spede® Drives, with constant tension control, wind up the metal strips.



Completely Dynamatic driven paper super-calender. Adjustable speed liquid cooled couplings with Eddy-Current brakes drive the calender rolls and center rewinder. Dynamatic liquid cooled brake provides center unwind hold-back. Co-ordinated controls provide for wide-range adjustment of speed and tension.

Dynamatic Eddy-Current Drives with tension controls are used extensively in the fields of paper, rubber, textiles, ferrous and non-ferrous metals, plastics, and printing.

Combined with associated controls, Dynamatic Eddy-Current Drives provide automatic constant tension as the roll diameter changes on center rewinds and unwinds. Constant tension is maintained over a wide range of material delivery speeds without the use of dancer or follower rolls. Controls may be adjusted for tapered tension to increase or decrease tension automatically as the roll changes diameter.

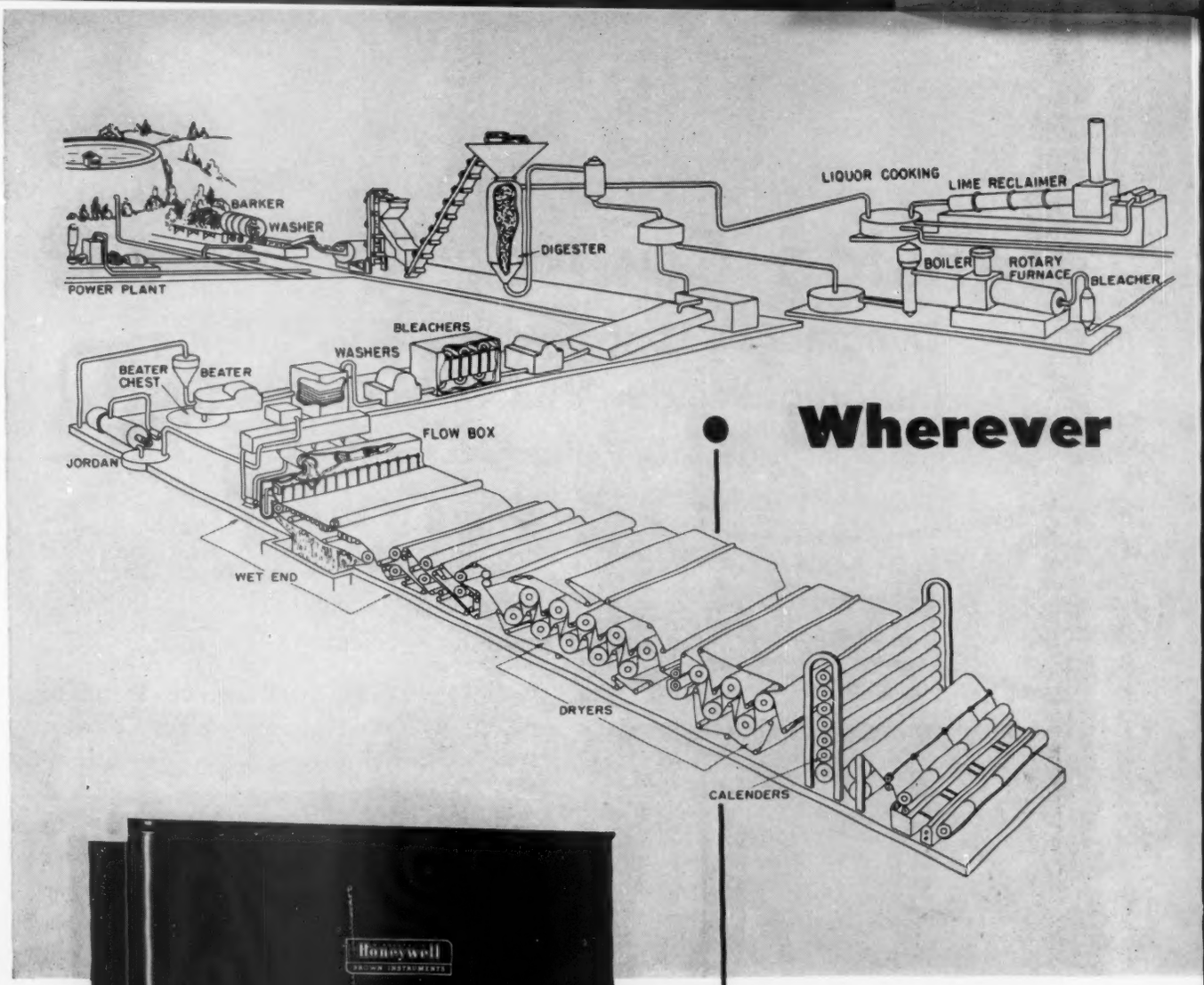
Multi-range tension or tension adjustment over a wide range is easily accomplished at the operator's station to accommodate materials of various thicknesses or widths. Control modifications are available to provide for inertia compensation and other individual requirements. Dynamatic engineers are available for consultation on your problems.

Bulletins giving detailed information on Dynamatic Tension Control will be sent free at your request.

EATON

EATON

DYNAMATIC DIVISION
MANUFACTURING COMPANY
3307 FOURTEENTH AVENUE · KENOSHA, WISCONSIN



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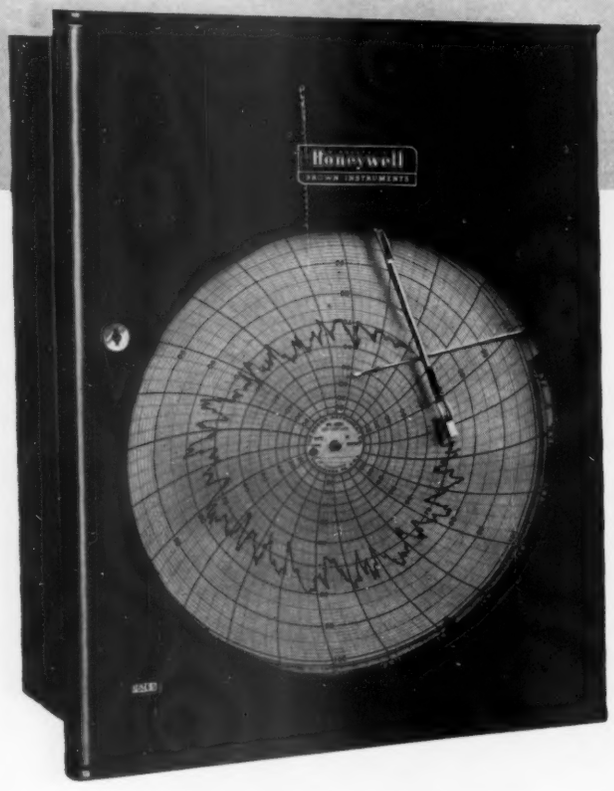


Brown Recording-Integrating Flow Receiver

Brown Flow Meters

are handling fluids such as these:

white water	white liquor
raw water	green liquor
boiler water	black liquor
stock	chlorine
steam	chlorine dioxide
fuel oil	bleach
air	caustic
size	acid
alum	hypo

there's fluid in a paper mill—

there's a Brown Flow Meter

for measurement or control

JUST pick any fluid found in a paper mill. There's a Brown flow meter to measure its flow. Indicating, recording, integrating models. Electric and mechanical types. Evenly graduated and square root scales. Electric and pneumatic transmission. Electric and pneumatic control . . . including ratio, cascade and program systems. Any kind of metering, in fact, for any kind of fluid . . . for process control or for accounting purposes.

Brown flow meters have many time and cost saving features. Interchangeable range tubes, for instance. To switch metering range, you just substitute a new range tube at the meter body and put a new chart on the instrument. There's no need for costly change of orifice plates . . . no process interruption.

You'll save time and money through Honeywell's on-the-spot field service, too. A call to any of the more than 100 branch offices will bring you prompt help by a factory-trained specialist, for installation, start-up or emergency service.

Over 28 years of Honeywell experience in paper mill flow instrumentation is ready to work on your requirements. For a discussion, call your local Honeywell sales engineer . . . he's as near as your phone.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, Wayne and Windrim Avenues, Philadelphia 44, Pa.—in Canada, Toronto 17, Ontario.

● REFERENCE DATA: Write for Catalog 2321, "Brown Flow Meters."

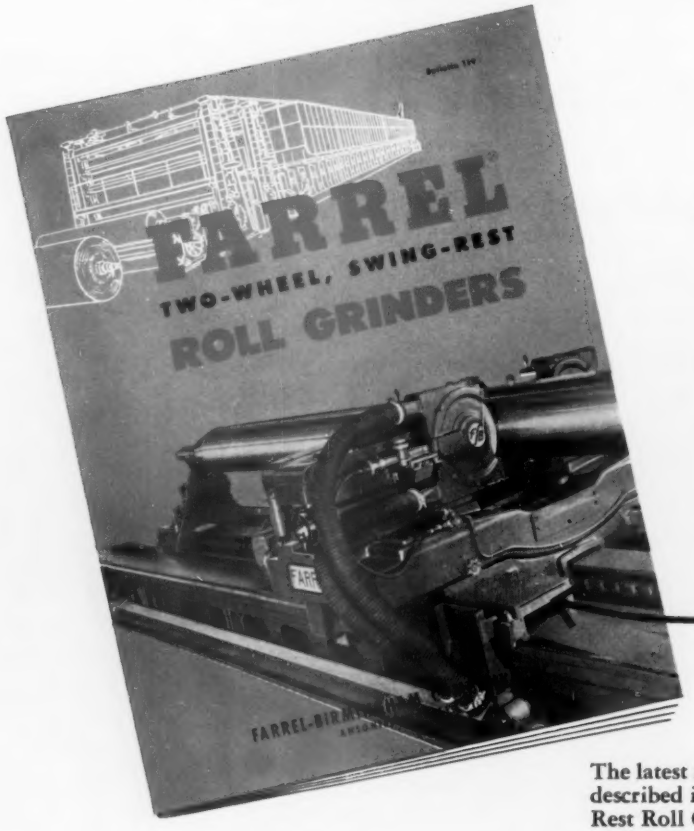
MINNEAPOLIS **Honeywell**

BROWN INSTRUMENTS

First in Controls

READ ALL ABOUT

the most accurate machine ever devised for grinding paper-machine rolls



Grinder improved for even greater accuracy!

The latest in a long line of superaccurate roll grinders is described in the new 20-page bulletin, "Farrel® Swing-Rest Roll Grinders." Included in the bulletin are illustrations and descriptions of design features, specifications, capacities, weights, etc.

The detailed description of the swing-rest principle in the bulletin shows why rolls used in the widest and fastest calenders currently operating are ground to the closest tolerances of both roundness and straightness.

The streamlined appearance of the grinder is an indication of the many refinements that have been made in the design. Example: The grinding wheel spindles and their mounting in Farrel "Truaxial" bearings, which contribute importantly to the higher standards of accuracy, uniformity and finish obtained with the Farrel machine.

This bulletin should be in the hands of everyone responsible for grinding rolls. Use the coupon to send for your free copy.

FB-1009

FARREL-BIRMINGHAM COMPANY, INC. PP
Ansonia, Conn.

Please send me, without cost or obligation, a copy of bulletin 119, "FARREL TWO-WHEEL SWING-REST ROLL GRINDERS"

Name.....

Company.....

Address.....

City.....State.....

FARREL-BIRMINGHAM COMPANY, INC., ANSONIA, CONN.

Plants: Ansonia and Derby, Conn., Buffalo and Rochester, N. Y.
Sales Offices: Ansonia, Buffalo, New York, Akron, Chicago, Fayetteville (N. C.), Los Angeles, Houston

Farrel-Birmingham®

Here is must reading for profit-minded paper mills

Your quality—and profit—will start here with this new improved Manchester Suction Main Press.

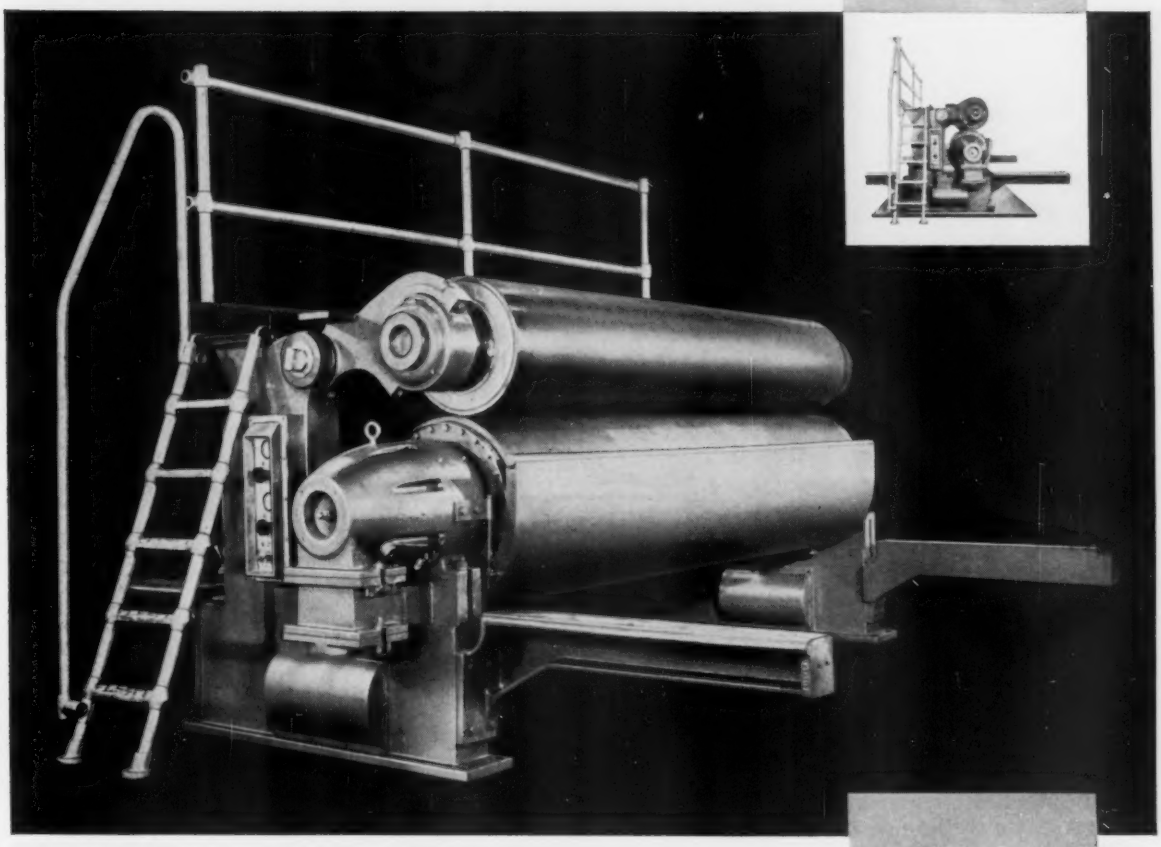
Take a close look at the picture. Note the simple, compact, rugged design of this press. With it, you get more complete water removal, better moisture control, less broke, a higher drying rate, cleaner felts, and longer felt life. The end-result is a more uniform top-quality sheet, steady profit, and a strong competitive position.

The Manchester Main Suction Press is engineered as a complete unit, ready to place in your present machine without costly changes or lengthy shutdown.

Get all the facts. Write us today.

OTHER PRODUCTS:

Primary Presses
Size Presses
Pope Type Reels
Paper Machine Drives
Rubber-Covered Drilled Suction Press Rolls
Drilled Suction Drum Rolls
Drilled Suction Couch Rolls
Cylinder Molds
Smoothing Presses
Winders and Slitters
Complete Fourdriniers

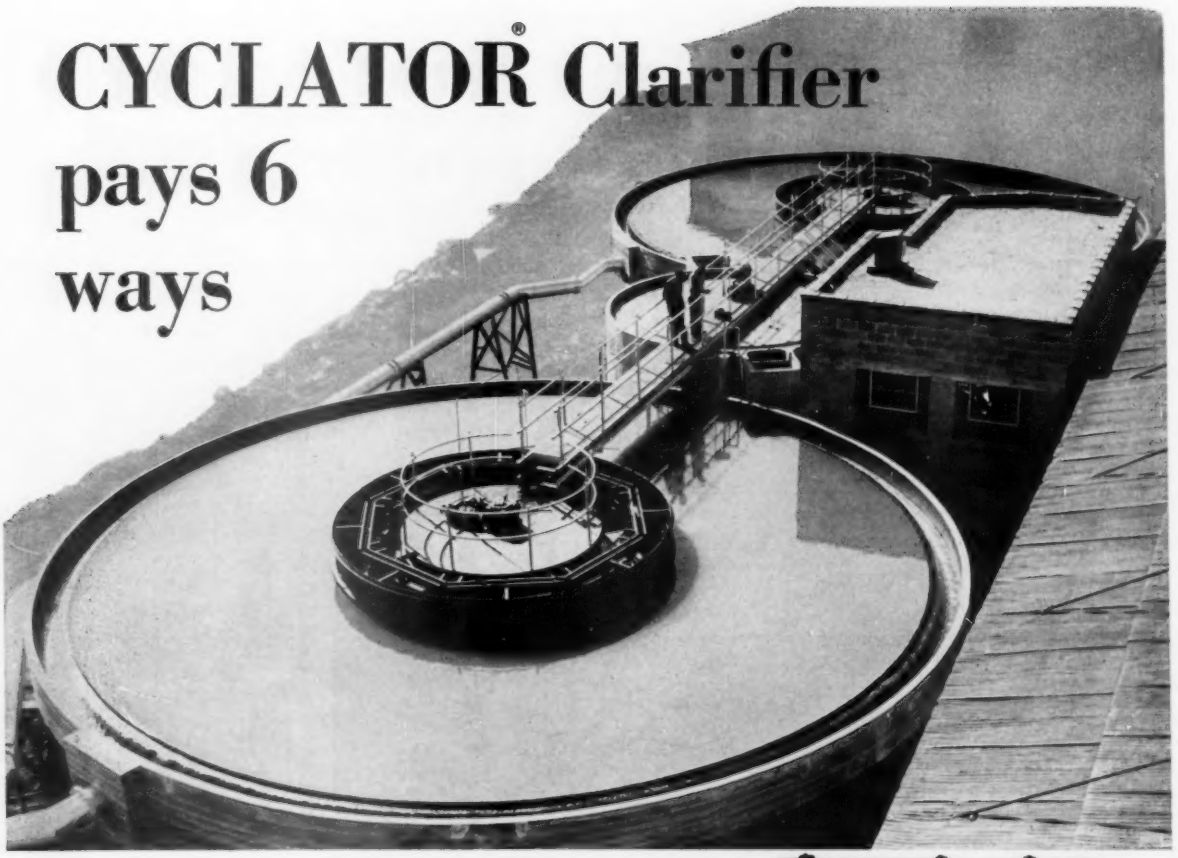


Manchester Suction Press

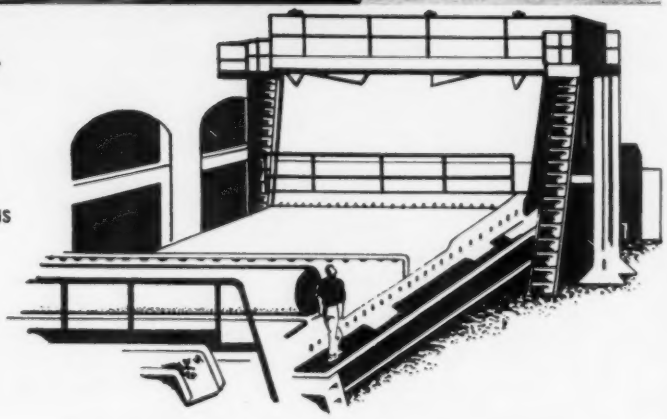
The Manchester Machine Co., Middletown, Ohio

SPECIALISTS IN DESIGNING AND BUILDING PAPER MILL MACHINERY

CYCLATOR® Clarifier pays 6 ways



...in clarification of white water and paper plant effluents.



1. Earns dividends in value of water returned to process and/or in fibre recovery.
2. Combines chemical and mechanical methods **plus** solids recirculation in a single unit.
3. Eliminates separate mixing, coagulating and settling basins.
4. Saves valuable space.
5. Handles shock loads efficiently.
6. Permits quick startups after shutdowns.

These and numerous other important advantages will help you solve your pollution problems efficiently—perhaps even at a profit! Just compare the CYCLATOR Clarifier with ordinary equipment. Its superiority will be immediately obvious. The famous INFILCO line of water and waste treating equipment features other important units for paper mill operators. Included are the ACCELATOR® Clarifier for water treating, the SEDIFLOTOR (trade-mark) Saveall for fibre and water recovery, anthracite filters, for polishing green liquor and white liquor, and other equipment of finest design and manufacture.

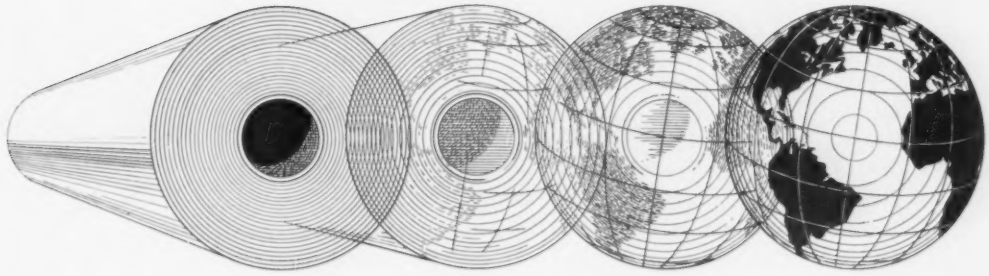
Our engineers are at your service, together with the knowledge gained from many years of specialized experience in pulp and paper fields. Whether you are modernizing an old plant or planning a new one, write for complete information today.

INFILCO

The one company offering engineered equipment for all types of water and waste processing—coagulation, precipitation, sedimentation, flotation, filtration, ion exchange and biological treatment.

INFILCO INC. 920 South Campbell Ave., Tucson, Arizona
Offices in principal cities in North America

EXPANDING?
BUILD
FOR
WORLD SALES



THROUGH

CNC

Today, planned expansion is being put into action by the top management of leading pulp, paper, board and newsprint mills. Why? Because it means building for bigger sales where the best opportunities lie... building for steady sales in line with new production facilities. Some of the finest of these opportunities are overseas, where rising living standards are bringing about increased paper consumption.

If you are planning for your own mill, it pays to consult Central National Corporation now. By maintaining constant, intimate contact with all the important foreign paper markets, CNC is able to serve you with the most up-to-date information on overseas conditions and developments. Its network of 55 representatives stands ready to merchandise your line of products.

Find out how you can broaden your sales on a long-term basis, establish an important "cushion" against local ups-and-downs—yet yours is a domestic sale. Plan now for export through CNC. *Contact us today.*

CENTRAL NATIONAL CORPORATION

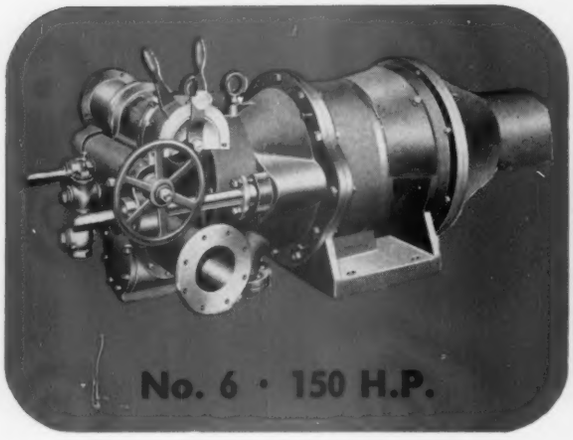
PAPER EXPORT CNC

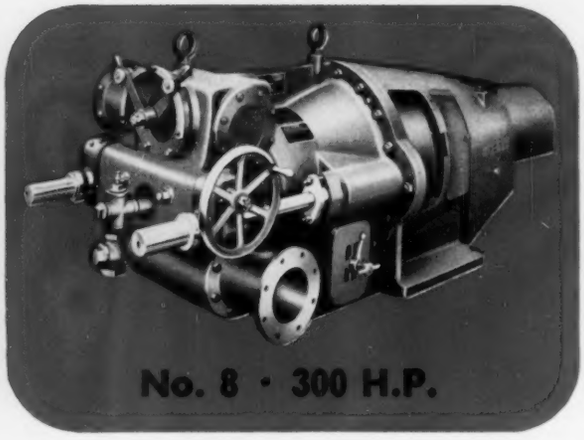
PULP EXPORT CNC

100 Park Avenue, New York 17, N. Y.

D. Samuel Gottesman, *President*

MORDEN "STOCK-MAKER"





Now Available in 2 Sizes!

The No. 6 "Stock-Maker" has long been used on small to medium production requirements. The No. 8 "Stock-Maker" now offers the same quality of treatment for larger tonnage applications.

Hundreds of "Stock-Makers" throughout the world are daily proving the efficiency and effectiveness of the "Stock-Maker's" beating-type treatment for maximum fiber development with minimum cutting. The "Stock-Maker" readily handles many variations of treatment on different pulps and grades of paper or board.

"Stock-Maker" features have *always* included:

1. Continuous-flow series operation for direct-to-machine control of production.
2. Closed-system, pump-through operation for pressure treatment.
3. One-piece cast alloy fillings for ruggedness and uniformity.

Investigate how the "Stock-Maker" can help your production!

To Mordenize... Use

- MORDEN SLUSH-MAKER FOR PULPING
- MORDEN STOCK-MAKER FOR BEATING
- MORDEN STUFF-MAKER FOR JORDANING

Representatives:

Northeastern States:
ORTON CORPORATION, Fitchburg, Mass.

Midwestern States:
DAN B. CHAPMAN, Appleton, Wisconsin

Southern and Southeastern States:
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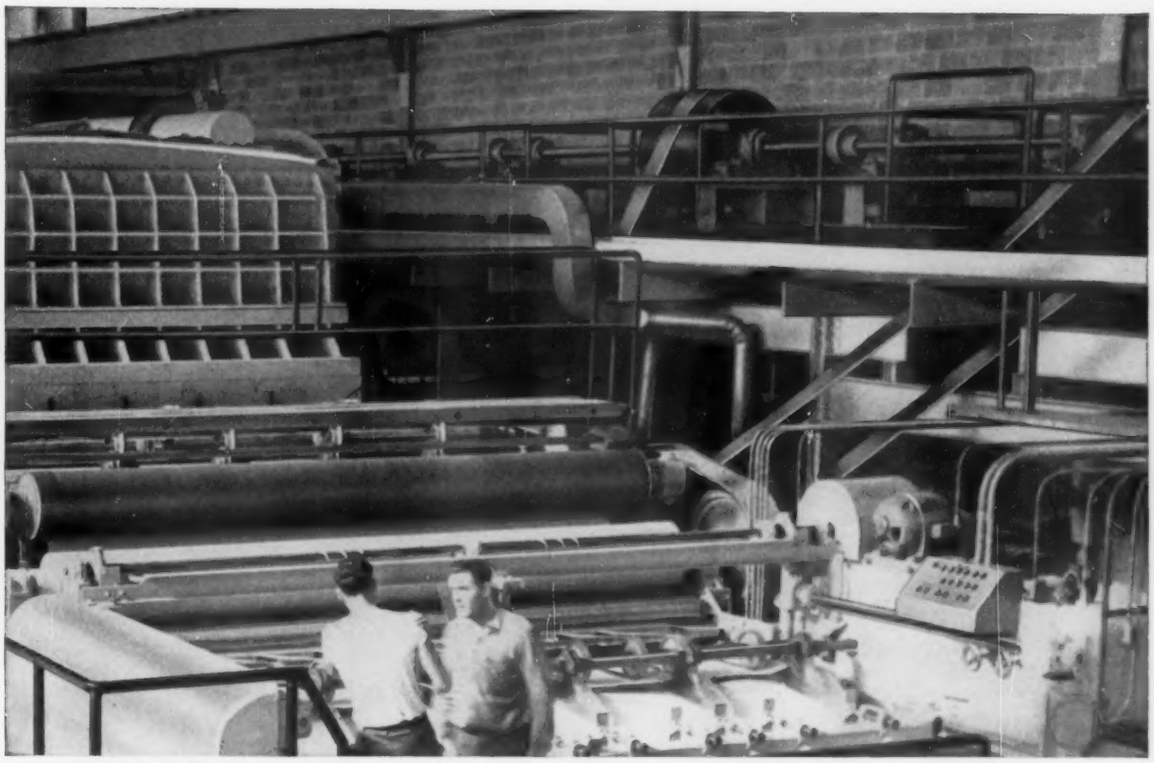
MORDEN
STOCK PREPARATION EQUIPMENT
MACHINES COMPANY

3420 S. W. MACADAM — PORTLAND, OREGON

Other Representatives in Most Paper-making Countries



Before you buy Cone Drive Belts compare the advantages of *Tannate flat*

Tannate Flat Leather belting is the ideal belt to use on the lineshaft-flat belt paper machine drive because you can depend upon Tannate belts to:

(1) deliver a smooth flow of power and maintain constant draws with few adjustments.

(2) consistently pull the full load between scheduled shutdowns.

(3) operate efficiently at belt speeds ranging up to 6,000 F.P.M. because they are flexible and strong.

(4) conform to the taper of cone pulleys because they are resilient.

(5) withstand water and moist operating conditions as well as high temperatures.

(6) resist deteriorating action of excessive machine oils.

(7) have sufficient lateral rigidity to withstand the action of the shifters.

We'll be glad to give you the complete story on the low cost simplicity and dependability of the paper machine lineshaft-drive with Tannate flat leather belting. For further details write J. E. RHOADS & SONS, 2100 W. Eleventh St., Wilmington 99, Del.

what is Tannate® ?

Tannate is the trade name for the *special tanned leather* developed and produced by J. E. Rhoads and Sons especially for the manufacture of flat leather belting. It combines exceptional grip, pliability, elasticity, strength, and durability. It will resist moisture, mineral oils and the fumes of most acids—will withstand high temperatures (212°F. dry, 170°F moist).

RHOADS

INDUSTRIAL LEATHERS

WILMINGTON • NEW YORK • CHICAGO • ATLANTA

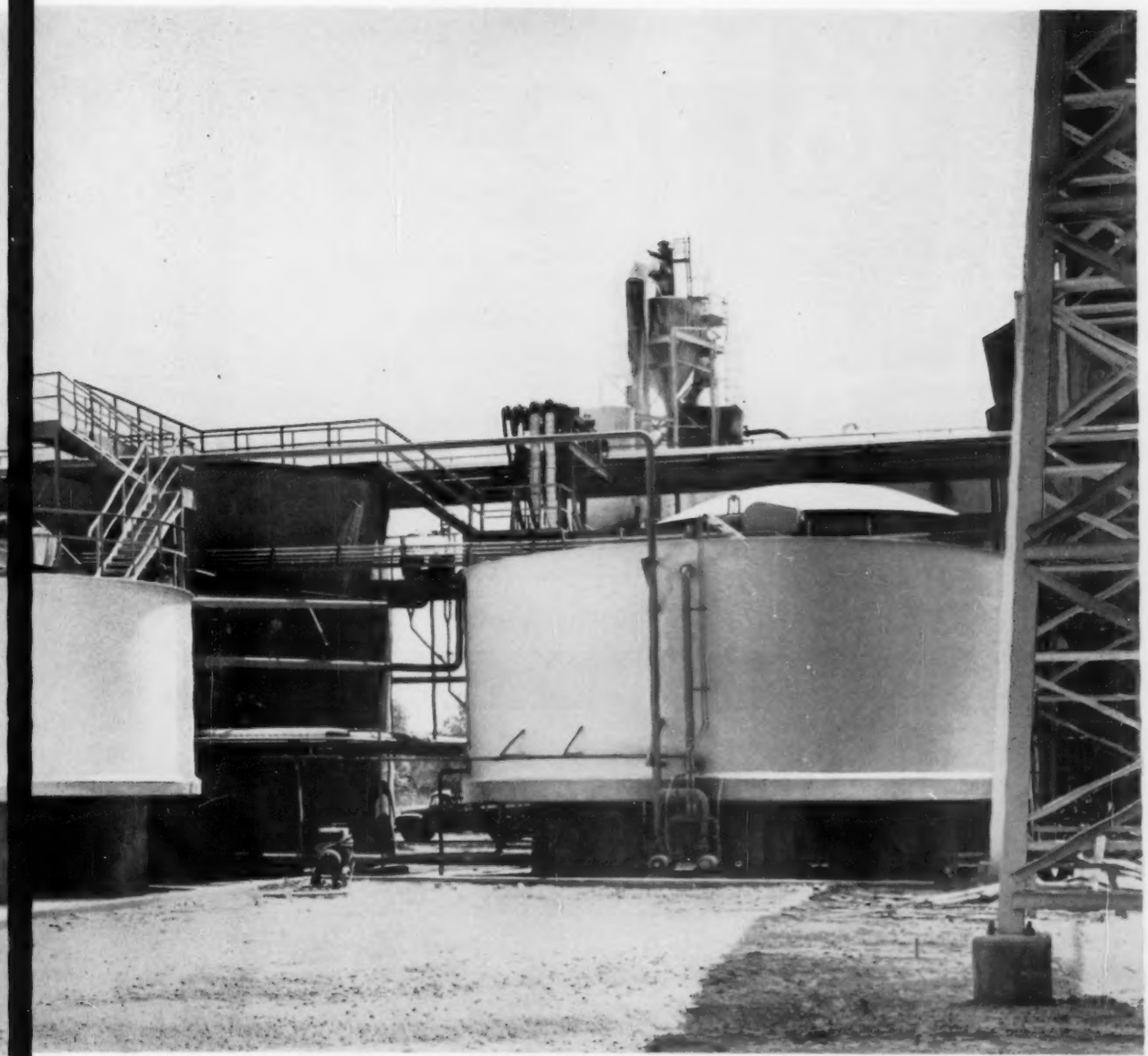
New Development

in Dorr Continuous Recausticizing System

Substantially Reduces Initial Costs...

Simplifies Operation

Latest development in Dorr Continuous Recausticizing is embodied in the Green Liquor Clarifier and Dregs Washer shown in the photograph above. Installed at the Valdosta, Georgia mill of National Container Corporation, the units incorporate a new principle which makes possible a saving of up to 50% in mechanism and tank costs. Instead of multiple compartments served by separate mechanisms, each unit now consists of a single compartment with one mechanism and incorporating a large diameter deep feedwell extending well down toward the bottom of the tank.



The ratio of depth to tank diameter is adjusted to bring into balance the various functions essential to good clarification. Hydraulically, the flow patterns produced are controlled to make maximum utilization of overall tank volume.

This recently proven principal of Selective Density Feeding as applied to the Dorr System means substantially lower investment costs, lower maintenance costs, and simplified operation. In existing Systems the green liquor station can be converted to this new unit design and in most cases will give equal performance to that of tray units with the added advantage of greatly simplified operation.

The remainder of the Dorr System at Valdosta is standard in all respects and includes two Oliver Lime Mud Filters, both 6′ diameter by 6′ face.

If you'd like more information on these new developments in the Dorr Continuous Recausticizing System, write Dorr-Oliver Incorporated, Stamford, Conn. In Canada, 26 St. Clair Ave. E., Toronto 5.

DORR-OLIVER
INCORPORATED
WORLD-WIDE RESEARCH • ENGINEERING • EQUIPMENT
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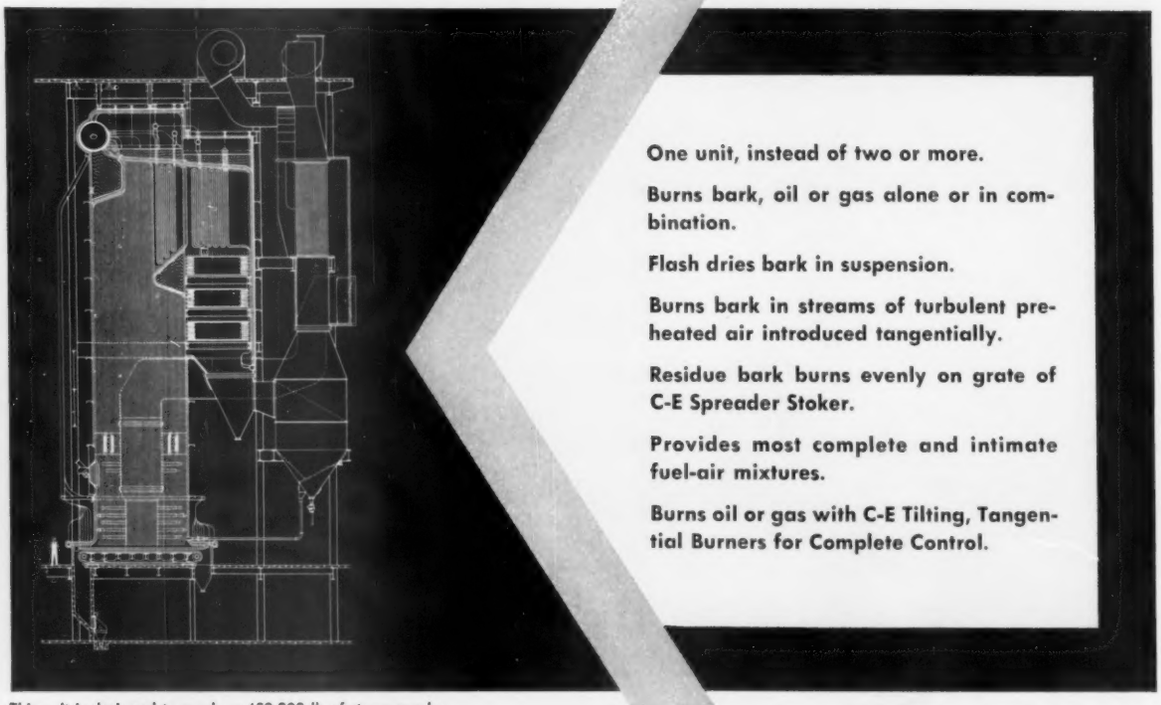


One unit, instead of two or more.

Burns bark, oil or gas alone or in combination.

Flash dries bark in suspension.

Burns bark in streams of turbulent preheated air introduced tangentially.

Residue bark burns evenly on grate of C-E Spreader Stoker.

Provides most complete and intimate fuel-air mixtures.

Burns oil or gas with C-E Tilting, Tangential Burners for Complete Control.

This unit is designed to produce 450,000 lb of steam per hr at 1335 psig and 958F.

It's a POWER BOILER and BARK BURNER combined

Many mills use one or more separate power boilers to supplement the steam supply from their bark burning units.

The unit illustrated here is a combination of these two boiler types. It combines, in a single unit, sufficient capacity to meet the steam needs of the average mill, thus saving both space and money. It reduces steam and water piping requirements, decreases operation and maintenance costs, avoids duplication of controls and reflects an initial cost considerably less than that incurred for two separate boiler types having a comparable combined capacity.

In this new design the combination of the long established C-E Tilting, Tangential Burners with the service-proved C-E Spreader Stoker permits a freedom of choice in operation never before available. Now you can burn oil, gas and bark in the same furnace . . . efficiently, dependably and economically . . . alone or in combination. You take full advantage of your bark supply and use purchased fuel only to meet exceptional steam demands or when your bark supply is inadequate.

For further information, contact the C-E office nearest you. Or—if you prefer write or phone the C-E Paper Mill Division in New York. You can't go wrong—if you see C-E.

COMBUSTION ENGINEERING

Combustion Engineering Building • 200 Madison Avenue, New York 16, N. Y.

B-902

Canada: Combustion Engineering-Superheater Ltd.

STEAM GENERATING UNITS; NUCLEAR REACTORS; PAPER MILL EQUIPMENT; PULVERIZERS; FLASH DRYING SYSTEMS; PRESSURE VESSELS; DOMESTIC WATER HEATERS; SOIL PIPE

CHAIN BELT

answers your Wood Handling Problems...

with drive chains

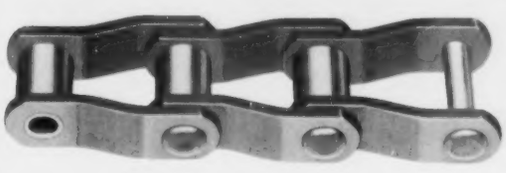
that give more service at lower cost

...keep production humming!

Here's a good way to solve the problem of moving wood through your production lines — the *complete* line of Rex Roller and Chabelco Drive Chains.

Rex Roller Chains combine the ultimate in workmanship, precision manufacture, skillful hardening and selected metals to produce chains of unequaled durability. These chains work at peak performance over long periods . . . are famous for their low maintenance and long-lasting, cost-cutting qualities.

Rex Chabelco Drive Chains are the first choice of lumber or pulp plants where extreme conditions of dust, dirt, temperature or shock loads are present. Precision-made and long lasting, yet they operate on inexpensive cast sprockets.



Rex Chabelco Drive Chain

Precision-built to close tolerances, this Rex Chabelco Drive Chain is an ideal choice on heavy-duty drives of slow to moderate speeds. Frequently used as a replacement for cast chains where greater strength, higher speeds and longer life are desired. Advanced heat-treatment methods assure long, economical, trouble-free service.

Rex Roller Drive Chain

Where loads range from light to heavy on high-speed drives, Rex Roller Drive Chain will give you the ultimate in service. These chains are designed to handle the heavy shock loads of rugged wood handling equipment. They are available in single or multiple strands. Their close tolerances, special heat-treatment, and precision manufacture assure the most efficient operation at the lowest cost.

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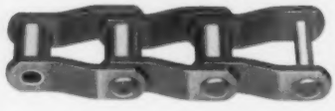
Rex H-Type Mill Chain — Most popular of all sawmill size chains for conveyor use. A tough, versatile chain with special wearing shoes for sliding.

Rex H-Type Mill Conveyor Chains—Used for conveying slabs, chips, sawdust and refuse. Heavy, one-piece links with thick barrel provide long wear and good scraping action.

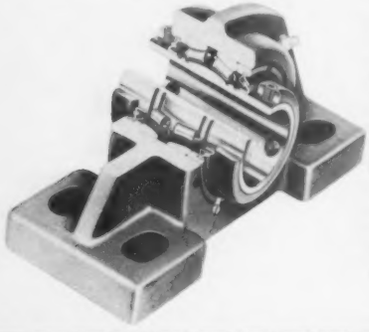
Rex Durobar and Combination Chains — A proven standard for wood handling service. Eccentric barrel of Durobar chain reduces wear on both chain and sprockets.

Rex Roller Drive Chain—The ultimate in high-speed drive chain. Highly flexible to withstand heavy shock loads. Precision-made for longest life. Available in single or multiple strands for a variety of drive uses.

Rex Roof-Top Transfer Chains — Primarily a green chain, but frequently found in sawmill transfer service. Choice of peaked or flat roof-top design. Flat roof generally used for handling finished lumber as it will not score.



Rex Chabelco Chains — For severe conveyor service, Rex Chabelco Chains are first choice. Available in both straight and offset side bar construction. Also special Chabelco Chains designed for log deck, log haul-up, trimmer, etc. service.



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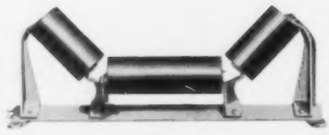

Rex Style No. 46 Troughing Idler — Specially designed for handling wood chips. Concentrating rolls of the idler are sloped at 45° to provide exceptional carrying capacity. This feature permits loading of chips close to the belt edge without spillage and gives the belt additional carrying capacity when compared to the conventional 20° sloped idlers.

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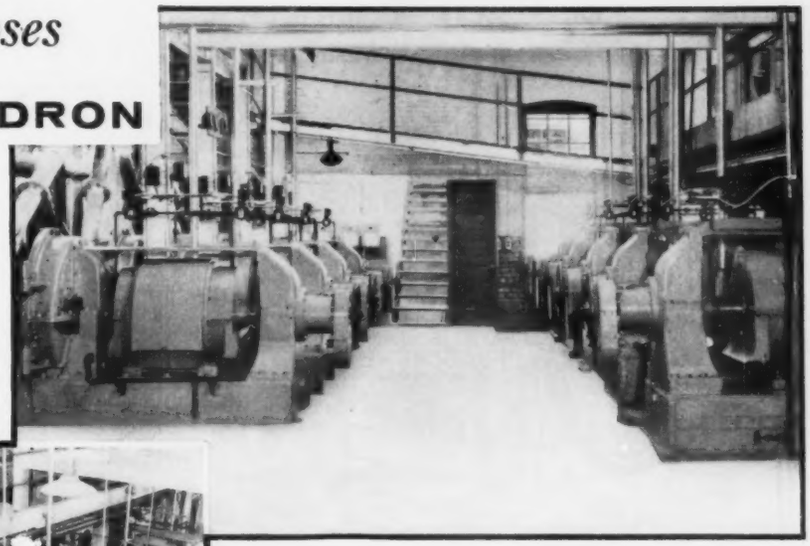
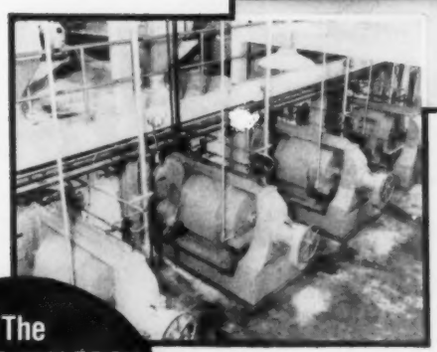
36-2 Refiners





Nine Sprout-Waldron 36-2 Refiners at Gaylord Container Corporation, Bogalusa, La., refining pulp for 9-point corrugating board. Two-stage refining is used with five Sprouts in the primary stage (two on kraft knots and rejects; three on neutral sulphite semi-chemical chips). Four refiners in the secondary stage finish the pulp.

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For more information on semi-chemical pulping or any other pulping application, send for our file of technical and practical data. Write to Sprout, Waldron & Co., Inc., 32 Logan St., Muncy, Pa.

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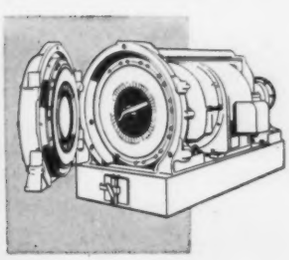

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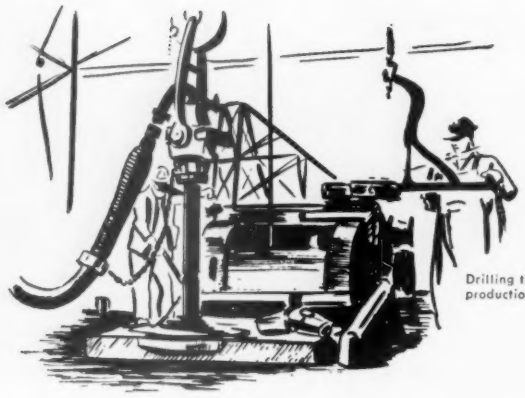

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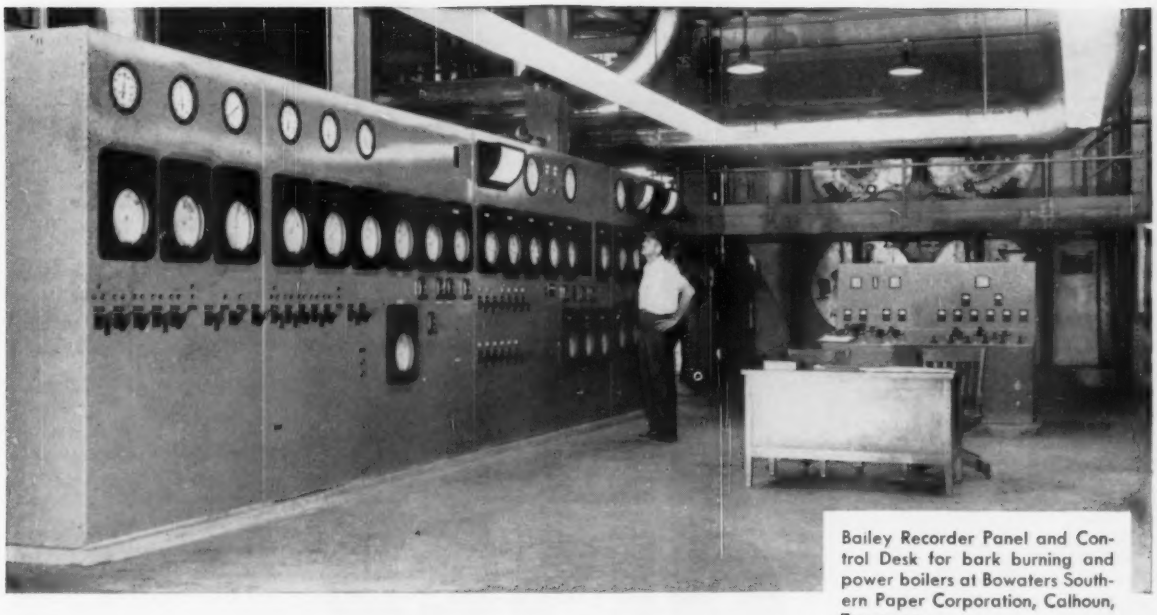

Bailey Recorder Panel and Control Desk for bark burning and power boilers at Bowaters Southern Paper Corporation, Calhoun, Tennessee.

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PULP & PAPER PRESENTS ITS 14-MAN PANEL . . .

PULP & PAPER presents on these pages a unique panel discussion of management-union relationships and employer-employe relationships.

In organizing this "blue ribbon round table," PULP & PAPER selected 14 industry executives who have reputations in the industry for extensive enlightened experience in these matters. They are men who have shown real leadership, understanding, sincerity and notable success in dealing with these problems of management.

They range from presidents to staff men, they represent big and little companies, they live and work in widely separated regions from Florida to British Columbia, from Maine to California.

PULP & PAPER proudly presents its panel:

MAXWELL D. BARDEEN
President
Lee Paper Co.

ROBERT E. BUNDY
Executive Vice President
Fibreboard Products Inc.

J. M. CONWAY
President and General Manager
Charmin Paper Mills, Inc.

T. T. DUNN
Vice President i/c Manufacturing
Union Bag & Paper Corp.

HARRISON F. DUNNING
Vice President i/c Operations
Scott Paper Co.

M. J. FOLEY
President
Powell River Co.

RUDOLPH T. GREEP
Production Manager
S. D. Warren Co.

GEORGE R. KOONS
Industrial Relations Manager
Bowaters Southern Paper Corp.

CHARLES H. REESE
Vice President i/c Manufacturing
Nekoosa-Edwards Paper Co., Inc.

CHARLES R. SEABORNE
Executive Vice President
Thilmany Pulp & Paper Co.

ALEX SMALLEY
Vice Pres. i/c Industrial Relations
St. Regis Paper Co.

MARVIN W. SWAIM
1st Vice Pres. and General Mgr.
Alton Box Board Co.

WILLIAM T. WEBSTER
Vice President
National Container Corp.

A. D. WILKINSON
Director of Industrial Relations
Kimberly-Clark Corp.

Pro and Con—How to Negotiate

Industry executives discuss bargaining tactics and ethics, relations with unions, relations with employes

• To encourage these 14 men to really "let their hair down" and speak frankly on union and employe problems and issues, PULP & PAPER created a "potpourri" of their views. No one is quoted by name. No one individual necessarily agrees with any other views than his own. Comments of each gentleman appear several times in this report. Each one's commentary is broken down according to subjects discussed.

The springboard for this symposium was the article "What's Wrong with Managers?" which appeared on page 63 of the January issue of PULP & PAPER. This was a PULP & PAPER report of views informally expressed by Colin Gardner III, vice pres. and gen. mgr., The Gardner Board & Carton Co. He said management loses prestige with public and employes when it goes to the bargaining table with a lower offer than it is really prepared to grant. This unofficial summary of Mr. Gardner's views stimulated varied responses from the panel. Some were 100% behind him, some not at all, but many partly agreed with him, or with some of his ideas, or in principle.

HERE GOES—the panel speaks—but as *individuals:*

"We would agree that the businessman who goes to the bargaining table with a counter offer which is 'less than realistic or reasonable' jeopardizes both his employes and community relations. This method is not practiced by progressive companies. We imagine when this 'strategy' is used, its purpose is to offset equally unreasonable and unrealistic demands by organized groups. Two wrongs do not make a right."

However—"we could not imagine a businessman going to a bargaining table with an entirely reasonable offer and having it accepted at face value. Negotiating does not work that way. If it did there would be no place for union representation."

"Mr. Gardner may have overemphasized a bit. However, there is little room to honestly doubt that many managers at the bargaining table act, or are interpreted as acting, in a way that prejudices labor and the public against industrial management. Too many times there seems to be lack of honest concern, understanding and preparation for meeting the issues. This often leads management to take an arbitrary, defensive and unrealistic position."

HARMONY IS NOT "NEWS"—"A disagreement at the bargaining table still seems much more of a news item than a constructive, harmonious agreement worked out between parties who sincerely consider the best interests of people and enterprise alike. Mr. Gardner's views, I'm afraid, are too true.

However, I do not think management's mistakes are necessarily all intentional, especially in small plants where a manager is 'jack of all trades' and unable to devote the required time to employe relations. If we all have Mr. Gardner's intent we will still make some mistakes, but they will not likely be too serious.

"In a general way, I agree that it appears that much is left to be desired by management's approach to union bargaining. It would almost seem that 'haggling' is a better term than bargaining for what usually takes place.

"Our experience is that for successful negotiations there are two requisites: (1) To assess as accurately as possible what constitutes a fair and reasonable offer in reponse to labor's demands, and then stick to it; (2) to make no offer that does not involve a valid quid pro quo. This may relate to industry and area practice, cost of living or other external factors, but it should relate to performance on the part of the individual workers involved. As long as union-management negotiations are on a hand-out basis they can never be satisfactory to either party."

"I HEARTILY AGREE—in general, with Mr. Gardner. Certainly, many representatives of management play a bit too cagey for their own good at the bargaining table. On the other hand, there are two sides and in addition to industrial managers 'growing up' in their approach, union negotiators must 'grow up', too. Some unions deliberately want to put managements in an awkward position, and negotiate with that purpose in view. Most unions have not reached the point of maturity where they can accept a first offer by management, assuming that offer is sound economically and adequate in every respect. The unions seem to feel they must everlastingly prove and reprove to their memberships that they are doing a good job by 'beating more out of management' than it is willing to give."

"The American businessman in many instances approaches the bargaining table with the mistaken, but almost traditional belief that he must be in a position to 'horse trade.' He feels in this manner he can obtain for the company the most inexpensive settlement. His first offer, therefore, is far removed from the position he ultimately is prepared to take. His initial and subsequent offers are hard to justify, and each succeeding concession makes his position harder to defend."

"I have never gone to the table with an unrealistic counter offer in 20 years. If a significant number of managers do this, I would agree Mr. Gardner's conclusions are sound and the results he portrays in all likelihood ensue."

PANEL RESUMES DISCUSSION IN APRIL

Members of the 14-man panel have more to say in the April issue of PULP & PAPER. Next month this same panel will discourse on the responsibilities of managers to employes. And more on relations to unions.

PULP & PAPER is grateful to the panel members who have stated—in one way or another—how "glad" they are "to share in this promotion of constructive attitudes."

A GENUINE INTEREST—"I cannot agree that Mr. Gardner's views apply to all industrial management. There are thousands who take an active interest in the welfare of employes, a genuine interest which reflects favorably at the bargaining table."

"I think Mr. Gardner has taken too strong a position. Bargaining implies a difference or spread between objectives. Labor starts by asking for the moon; management takes a position on the low side. By negotiating they arrive at a mutually agreeable middle ground. This concept of bargaining is as old as history. Our fathers traded horses, we trade automobiles."

"To the extent that Mr. Gardner has challenged management to take a positive position at the bargaining table and to come to the table with positive programs and thorough preparation, he is unquestionably pointing up an area where there is room for considerable improvement by management people themselves."

"Mr. Gardner is correct on all counts. Management leadership is discounted and made to appear hypocritical by the present method of negotiation. However, I do not feel that Mr. Gardner has made a particularly clear suggestion as to how this unfortunate result of collective bargaining can be overcome." (Maybe PULP & PAPER'S fault; we did not report every word he said, but thought his views were adequately covered.)

BOTH KNOW WHAT'S RIGHT—"In negotiations management knows what is right and so does the union executive. Generally, a settlement is reached right on the point where both sides know that it will be. An analogy can be drawn from an artillery technique where the target must be bracketed to hit it. The whole difficulty is that management undershoots the eventual target because any moves that management makes is money, whereas any move that the union makes is merely the deflation of an optimistic request that costs no one anything except an 'anti-worker' label hung on management."

INFLUENCES OF THIRD PARTIES—"Human nature in all countries and ages have indicated the need to bargain and I do not believe that wage negotiations depart very greatly from the market place buying of vegetables or a rug. The close personal relationship of a bargain and a handshake is unfortunately gone. The bargaining table, with the introduction of third party influences, now make consideration of each employe's individual needs and differences impossible."

"I disagree with respect to approaching a bargaining conference with a 'realistic' proposal in order to avoid charges of being anti-labor or reactionary. Labor settlements made by individual companies, and particularly by small companies, are dictated to a large extent by patterns, or trends. We should indicate in advance a willingness to go along with a trend, only if we agree the trend is sound. If we believe it unsound, we owe it to ourselves and our country to make a case against it, even though the ultimate result is inevitable."

QUOTES EISENHOWER—"Probably too much emphasis has been placed on bargaining as connoting 'wrangle or dispute,' rather than 'confer or negotiate.' Is an unrealistic counter offer an 'inevitable' answer to union demands? I quote from President Eisenhower: 'Labor relations will be managed best when worked out in honest negotiations between employers and unions, without government's unwarranted interference. This requires maturity in the private handling of labor matters within the framework of both labor and management.'"

LATEST AIR VIEW OF GEORGETOWN MILL. International Paper's Georgetown, S.C., mill, one of the world's biggest, requires 18 million gals. of fresh water daily, besides 35 million gals. of salt water for cooling and condensing. It licked water problem by digging a canal 17 miles long to new water source.

SPECIAL PULP & PAPER REPORT

International Digs a Big "Ditch"

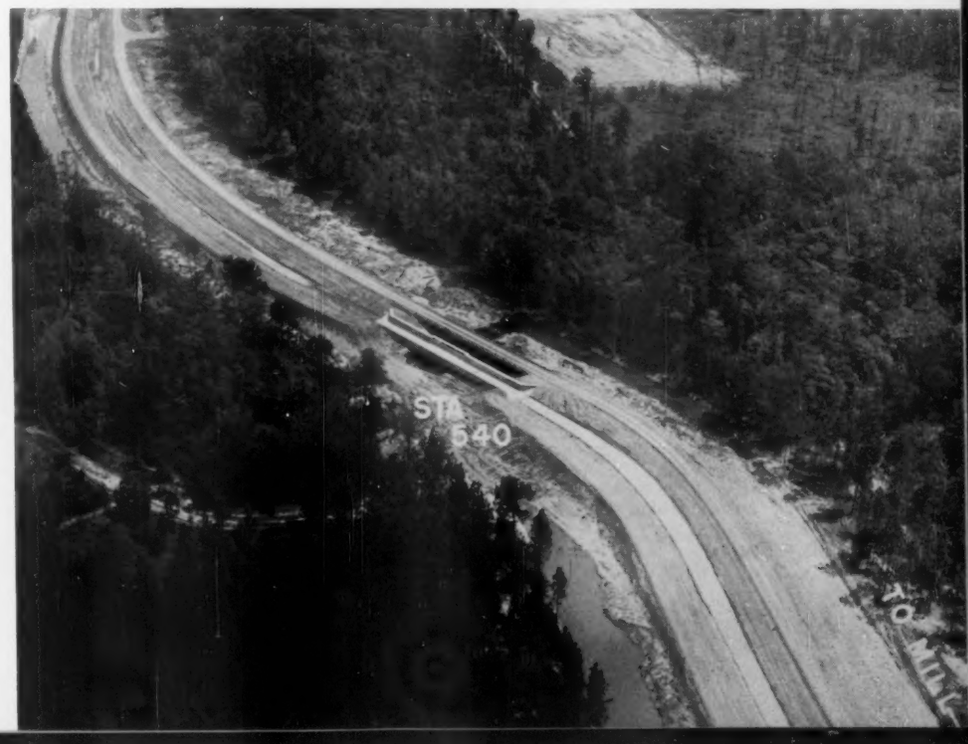
How Georgetown Mill joined two rivers with 17-mile long canal to insure a lasting supply of salt-free water

● In the summer of 1954, International Paper Co.'s big mill at Georgetown, S. C., was in trouble. It was faced with a serious water problem —the worst in 18 years. This in itself is not a unique problem. Many mills have had to cope with a water shortage at one time or another. What was unique was that IP's headache had been brought to a critical stage by two hurricanes.

As a result of them, International set out to lick the water shortage once and for all—and did. In doing so, it may have set a pattern that other mills may use, or modify, to solve their own water problems.

In its 18 years at Georgetown, the IP mill had experienced low water before. But never was it as bad as that summer. Bad rainfall during the previous five years had left the Black River at an all time low.

In August, Carol, 100-miles-an-hour strong, twirled past 40 miles out to sea. Soon afterward, Hazel ripped down the main street like a mad witch. Ironically, it was Carol, 40



HIGHWAYS OR STREAMS WERE NO OBSTACLE. International's long ditch to new water source went under or over them. In this stretch two parallel bridges had to be built. Concrete bridge carries water over local stream. Alongside it, a bridge for autimobiles.

Other Mills May Profit from I.P.'s Experience

The government reports that in some parts of the U.S.A., where big pulp and paper mills are operating, water levels are gradually, but inevitably, dropping. Besides this, there are many mills which face temporary, yet costly, water shortages.

What can these mills do? PULP & PAPER offers this detailed story of what the No. 1 pulp and paper company of the industry did in the case of its biggest mill at Georgetown, S. C., one of the world's biggest. To make more than 1,700 tons a day of kraft containerboard and Chemfibre corrugating on its three machines, the Palmetto State's huge mill normally requires 18 million gals. per day of fresh water and an additional 35 million gals. per day of salt water for cooling and condensing. That's a lot of water! Especially if you need it and don't have it all—almost is not enough.

How Georgetown solved its water problem may reveal some ideas that other mills could use.

Especially in behalf of readers who may have water problems, PULP & PAPER wishes to express appreciation to Mill Mgr. Howard D. Hinman and his entire staff at Georgetown for their cooperation in making this interesting story possible.

miles away, which did the most damage. It created tremendous tides which injected salt water far back up into the Black River. Hazel, leaving in its wake one stretch of beach that was swept almost to water level and cleared of all but two houses, brought blessed relief in the form of rain. But not enough.

THREAT TO SHUT DOWN MILL—By August, about 25% of the water flowing into International's fresh water lines was salty. The mill was besieged by foam and magnesium and salt deposits. It began to appear as though the mill would have to shut down two machines.

The city of Georgetown helped by giving the mill all the water it could spare. Mill fire engines were used to boost the pressure and recirculate water. Defoamants were thrown into the process but they seriously cut the sizing on the board machines and had to be reduced. Magnesium deposits were clogging screens and shortening wire life.

IP licked its headache in two ways —one temporary, the other permanent.

HOW BARGES BECAME "BATHTUBS"—A pipefitter named Ernie Watts came up with the first solution. He suggested that the company's pulpwood barges be used to ship water from farther upriver. When mill officials heard the idea they decided it was worth a try.

In September, holes were burned in the sides of a barge and fitted with pipes and valves. Then the barge was flooded. The first try was a failure. The big steel barge tipped over, let out a watery belch and sank. It was raised and this time holes were burned through the four center bulkheads. The two end compartments were left empty to give the barge bouyancy. In this way, flooding was equalized and the danger of tipover nullified. The barge was flooded to the 7-ft. mark and then topped with 2-ft. of water by pump. The scheme worked.

Use of these steel "bathtubs" is credited with keeping the third machine going through the critical months that followed.

HOW WATER RELIEVED CRISIS—Thanks to the barging system, some 2,500,000 gals. of water a day were added to the supply. Added to the water the Georgetown mill got from other sources, this enabled the mill to run all machines from September through December, when rain relieved the situation. The mill normally uses 18 million gals. of water a day with another 35 million, in salt water, used for cooling and condensing. All the water brought in the steel "bathtubs" went to the pulp mill.

Thoroughfare Creek, 15 mi. distant, was the nearest point from which water was barged. During the worst of the drought, 10 barges and 3 tugs worked full tilt hauling water from as far up the Waccamaw River, as 30 mi. away. Fire mains were used to pump the water from the barges to the mill.

When someone asked a mill executive whether IP was having a wood problem, what with its pulpwood barges tied up shipping water, he replied:

"If we didn't have the water, we couldn't use the wood anyhow."

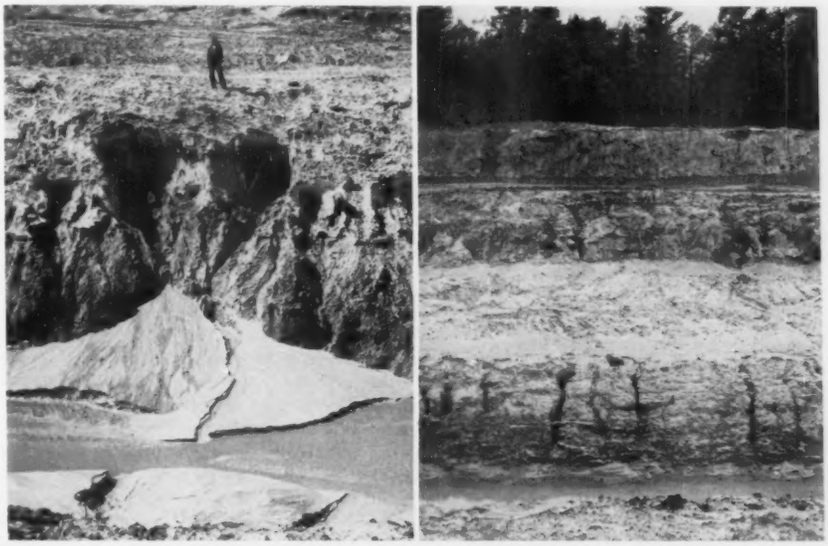
SEARCH FOR NEW WATER SOURCE—While International Paper Co. was working out its immediate water shortage with the barge system, they were concurrently planning a permanent solution to their water troubles.

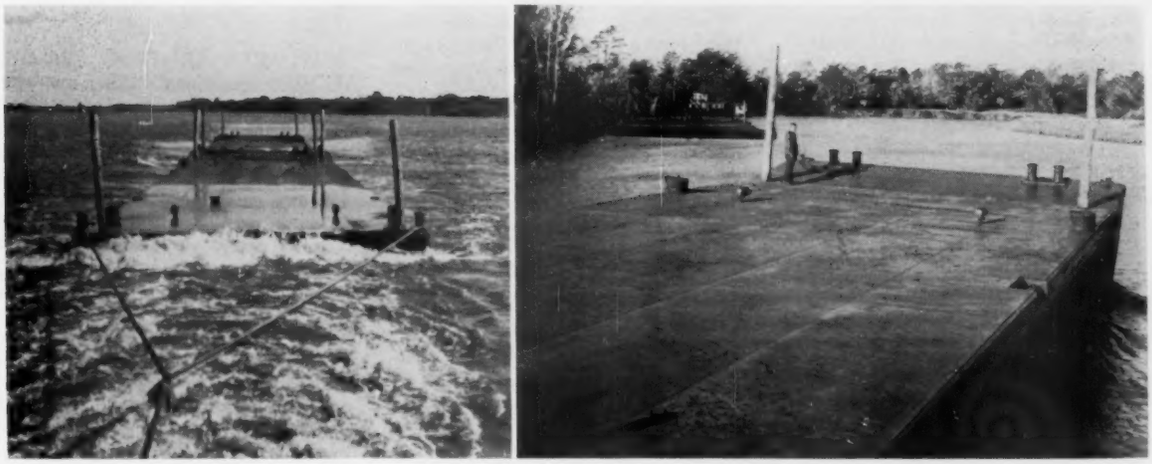
Various ideas were proposed for developing new water systems one of which was to use a reservoir and im-

CLEARING BANK FOR INTAKE CHANNEL. Northwest Engineering crane on banks of Pee Dee River for construction of intake channel from this new source of fresh water for Georgetown mill. Canal carries water 17 mi. to mill. This had been favorite fishing spot for 200 years, but IP fixed up a new one, nearby, for the anglers.

CAROLINA JUNGLE—BEFORE AND AFTER. (Left) Typical undergrowth, which International had to cut through for its ditch. To bring water from Pee Dee River to Black River, many problems were overcome. (Right) Worker clearing off part of 17-mile stretch for canal right-of-way. Contrary to good logging practice, stumps are left high, so they can be bulldozed out.

ANOTHER "BEFORE AND AFTER" SCENE. (Left) Another problem for International ditch diggers—erosion develops along walls of the ditch's deepest cut. Sand sloughs into canal. (Right) Here's how it was solved. By graduating the sides of the slope. Thus the engineers prevented any further damage by land slides.





BEFORE CANAL WAS DUG, THIS IS HOW GEORGETOWN GOT WATER. (Left) A pulpwood barge converted into steel "bathtub" brought water from 30 miles away to ease Georgetown Mill crisis. This barge carries 300,000 gals. IP execs explained: "If we didn't have water, we couldn't use wood, anyway." (Right) Empty barge, riding high, returns for another load. Note valves and open pipes, used to fill it. Fire mains were used to pump water into mill from the barges. End barge compartments were left empty to provide buoyancy.

pound water for use during the dry seasons. Another plan was to seek out an entirely new water source.

Because the average flow of the Black River was so meager, the second idea appeared the best. Sixteen miles north of the Black, chemists and engineers found what they were looking for—a location on a new watershed far enough from the ocean so there would be no danger of salt water intrusion. It was the Pee Dee River, one of the largest on the Atlantic Coast. The minimum record flow of the Pee Dee was 1,200 cu. ft./sec. as compared to the Black River's 2 cu. ft./sec.

THE "BIG DITCH" IS CONCEIVED—Once it had been determined that the Pee Dee was to be IP's new water supply, the big problem was how to get the water to the mill. Barber, Keels & Associates, consulting engineers from Columbia, S.C. proposed a long canal which would twist down from the Pee Dee to the existing pumping station at the Black. There, water from the Pee Dee could be piped directly into the two 24-in. pipes that existed and could then be pumped the remaining 9 miles to the mill. International liked the idea.

Drainage patterns, terrain, land contours, ownerships and other factors were studied by surveyors and engineers to determine the best course for the trench. Because of these influencing factors, the shortest line from one river to the other was not necessarily the cheapest nor the best. Once the land along the right-of-way was acquired, IP was ready to start digging. Construction began Dec. 28 1954.

MANY PROBLEMS TO OVERCOME—Construction of this 17-mi. trench was no easy task. Before they were through, construction workers built 17 bridges, 4 side spillways for overflow, crossed under 2 main highways, even built a bridge for the canal so water could flow over a surface water creek along the way. Dikes had to be built through low areas to keep the water flowing down the right of way toward Black River.

DIVER HOOKS UP PIPE ACROSS RIVER. When Georgetown canal reached Black River, 17 miles from its starting point, a pipeline had to carry canal water under the river to mill. Here a diver prepares to go 40 ft. down to join pipe which crosses 350 ft. underwater.

At the Black River end, a 45-acre pond was created to serve as a cushion of water to control variations in pumping, rainfall and to act as storage when the canal was not in use. A pumping station was built on the bank of the Pee Dee River utilizing low speed, low head, mixed flow Fairbanks Morse pumps which discharged water from the river directly into the canal. The pumps maintain a normal flow of about 1 ft./sec. when the canal is in use. This rate of flow is fast enough to prevent silt deposits in the canal and slow enough to prevent appreciable erosion along the sides.

The canal flows 2½ ft. deep, is 10 ft. wide at the bottom, and the sides slope on a 2-to-1 ratio. Slope from the Pee Dee to the Black River is about 1 ft. per 10,000 ft.

MORE PROBLEMS ARISE—Two areas along the right-of-way gave engineers some concern. One was an old bombing range, very flat, heavily vegitated and poorly drained. Only 22 ft. above sea level, this swamp may prove troublesome during periods of heavy rainfall. Since the canal will not be essential during rainy periods anyway, this is not serious.

At the end of the canal, before the canal reached the river, a 1,200 ft. wide rice field had to be crossed. Here, engineers used a 48-in. pipe to carry water across the watery field.

Perhaps the most dramatic and exciting phase of the project was the construction of the final link between the two rivers. Since the Black River pumping station was on the opposite side of the river, water had to be piped across its 350-ft. width.

Divers, working at a depth of 40 ft. linked the subaqueous pipeline.

NOW MILL AWAITS A SERIOUS TEST—International's canal was completed Aug. 31, 1955, at a cost of more than $1,200,000. It can provide the mill with an ample supply of 28,000 gals. per min. A larger pumping station at the Black River end could boost this output even higher.

Since nature provided the mill with 60 in. of rainfall in 1955, there hasn't been an opportunity to test the new water system under critical conditions. Tests, however, have shown that the canal is living up to the demands for which it was designed. With this new water system to lean on, International Paper Co. feels that it has licked permanently the problems which plagued it a little over a year ago. In so doing they might well have provided a model for other mills with similar problems to follow.

INSIDE VIEW OF PEE DEE PUMP STATION. Two Fairbanks Morse mixed flow pumps boost water along canal to Black River crossover and into pipeline to mill.

Rumor Says Two Largest Refiners Slated for Southern Kraft Mill

PULP & PAPER has heard reports that Shartle Brothers division of Black-Clawson Co. will soon begin installation of two jordan refiners operating at 800 hp each and designed to produce 1,000 tons of pulp. The refiners will be installed in a Southern kraft mill and will probably be in operation early next year. They will be covered by hoods to reduce noise.

The report was greeted with surprise by several top papermen who calculated the jordans will operate at about 1.6 hp per ton. They will be the largest refiners of the type in the South.

Supts. Fix Southern Meet

Southeastern and Southern Divisions of the Supts. Assn. will hold a Joint Fall Meeting on Oct. 17-19, 1956 at the Francis Marion Hotel, Charleston, S.C. There had been talk of meeting at Pinehurst, N.C., but final choice was a "mill city."

R. B. White, Sonoco Products, is chairman of the Southeastern Division. J. C. Hair, Crossett Paper Mills, is chairman of the Southern.

PULP & PAPER'S Editorial Produces "Paper Week"

PULP & PAPER's lead editorial last month "About Another Kind of Paper Week" (on "The Last Word" page—p. 152) was brought to attention of Mayor Robert Wagner of New York City by one of the major companies affiliated with this industry.

In the editorial it was proposed to hold another kind of Paper Week (not just the industry meetings at the Waldorf and Commodore) which would publicize pulp & paper and their products to the general public by displays, radio and TV shows and other events—as is done in cases of Cotton Week, etc.

Favorable reaction from the Mayor had results on the opening day of the industry's Paper Week. Commissioner Richard C. Patterson, Jr., Dept. of Commerce and Public Events for New York City, presented a scroll to Donald Leslie, APPA president, and Ted Tinker, executive secretary of APPA. The scroll officially proclaimed the week of Feb. 20-24 to be New York City's official Paper Week.

A 3-way credit for this proclamation goes to American Cyanamid, APPA and PULP & PAPER. A P&P editor mentioned the idea to an American Cyanamid public relations executive, who, working with APPA, contacted the Mayor's office—and got results.

Why Machinery Requires More Research

• A "lot of research" must go into every pulp or paper making machine today, President Cliff R. Crawford of The Black-Clawson Cos. told the biggest Ohio TAPPI section meeting of the 1955-6 year.

"Machinery has to be tailor-made to fit a particular problem," said Mr. Crawford. He was introduced to 235 members and guests at the January meeting in Middletown, O., by Joe Baxter, Jr., director of research and engineering, Black-Clawson.

Mr. Crawford recalled that some years ago a single piece of machinery might have been able to serve quite well on jobs that were not too much alike.

"Today that is not possible," he said. "Each mill has its own particular problem. Failure of a single piece of equipment can mean the loss of hundreds of dollars in production, due to the paper industry's increased rate of production."

But, added Mr. Crawford "even with all of the research and engineering staffs that machinery builders have, with which to service and supply the paper industry, the advances the former have made and will make are not possible without the help of the mills themselves. The mills should tell the manufacturer what they need most. Then they should be willing to install and try the machinery in their mills."

Mr. Crawford predicted a bright future. Progress will be made "as long as we have dissatisfied people with a good imagination," he said.

CLIFF R. CRAWFORD (left), President of The Black-Clawson Cos., told Ohio papermakers there is more need for research in machinery. He was introduced by **JOE BAXTER JR.** (right), Black-Clawson Director of Research and Engineering.

"GOOD HEAVENS, JUNIOR, if we didn't have trees we wouldn't have playing cards, cocktail napkins, comic books, racing forms, cigaret covers . . ."

Last Big Alaska Timber Offer Sold

Governor Comments on Sitka Sale

By B. FRANK HEINTZLEMAN
Governor of Alaska
(Especially for PULP & PAPER)

● After my 40 years in Alaska and years of seeking industries for its timber utilization, I had a small and unofficial role in the preliminary award of 5¼ billion bd. ft. of timber to the Japanese-controlled Alaska Lumber & Pulp Co. I signed the timber sale contract as a witness!

This was the last of the big pulp-timber sales in Alaska. It disposes of fine stands of timber on Baranof and Chichagof Islands, 67% hemlock and the rest mostly spruce.

I first met with the Japanese at our State Department in Washington, D.C., about five years ago. They sent over numerous teams of technical personnel and have obtained counsel of American consultants, including Harold Cavin, designer of the Ketchikan mill, and George Drake, former woods manager for Simpson Logging Co.

The Tokyo firm which organized Alaska Lumber & Pulp Co. is the Alaska Pulp Co., Ltd. It was incorporated Aug. 19, 1953, by several Japanese rayon and lumber concerns which have excellent records in industrial and financial fields.

Alaska Lumber & Pulp Co., an Alaska corporation, is headed by Junichiro Kobayashi, president, and Tadao Sasayama, chairman of the board. A representative in Seattle is Takuji Ohshima, executive director of AL&PCo.

The initial venture of AL&P in Alaska was the leasing for five years of an old sawmill at Wrangell. It is now operating as the Wrangell Lumber Co. and producing lumber for the American domestic market as well as for export to Japan. The company is modernizing this old mill and expects to achieve a cut of 2 million ft. per month.

The Sitka timber sale contract requires a pulp mill to be operating in the Sitka area by June 30, 1962. The mill is expected to produce 300 tons per day of high-grade pulp to fit in with industry requirements in Japan.

Sitka folks, 2,000 of them, are already making preparation for the great influx of population. The many hundreds of needed mill and woods workers will insure economic stability for this community—Alaska's former capital. Sitka, on the outside of Southeast Alaska islands, is an excellent location for export to the Orient.

The Japanese operations must be conducted by an American corporation just like any other business in the Territory, and must hire American workers and pay American wages.

OFFICIALS OF AL&P snapped by PULP & PAPER during flying trip to U. S. and Alaska. Sitting (l to r): TAKUJI OHSHIMA, Executive Director; S. YOSHIKAWA, Setttle, Consul for Japan; TADAO SASAYAMA, Board Chairman; ELIZO KASHU, Pres., Mitsubishi Rayon; YUKICHI ISHIDA, also Executive Director of AL&P, stationed in Seattle. Standing (l to r): **KENJI IKI,** interpreter and adviser; and Y. NIKI, a Director.

Exclusive Interview with Japanese Owners

● The last available Alaska pulp-timber unit for the foreseeable future was bid in by the Japanese-controlled Alaska Lumber & Pulp Co. at Juneau on Jan. 25. The Alaska corporation got preliminary award of 5¼ billion bd. ft. of timber on 300,000 acres in the Sitka area for the advertised stumpage price of $2.90 per M for spruce, $1.75 for hemlock and $1.65 for cedar and other species.

A 300-ton per day, $50,000,000 mill will make high alpha cellulose pulp, produced by the magnesia base sulfite process with chemical and heat recoveries, as used by Ketchikan Pulp Co. at Ward Cove, Alaska, Weyerhaeuser Timber Co. at Longview, Wash.—and—soon by Brown Co., Berlin, N. H.

After the sale, in an exclusive interview with PULP & PAPER, Tadao Sasayama, chairman of the board of AL&P, and one of Japan's leading businessmen, said: "Now that we are successful in obtaining the bid, we are going ahead. We will need a year to complete design and engineering and about two more to build the mill. We should have the mill completed by 1959.

"We are attempting to finance the $50 million Sitka mill through private financial houses in the U.S. We hope to raise half of this in the U.S. and the other half in Japan." AL&P's financial advisers are Dillon, Reed & Co. Inc.

NO ONE ELSE INTERESTED—Several U.S. firms sent timber experts to Alaska to look over possibilities but no other firm evidenced enough interest to offer a bid.

Elizo Kashu, president of Mitsubishi Rayon Co., Tokyo, was in Juneau and went east with Mr. Sasayama in February. He represents Japanese rayon interests and said a steady market for Sitka pulp has been guaranteed by 13 large Japanese companies.

Mr. Sasayama told PULP & PAPER construction and design will be carried out by American firms. None had been appointed.

Several hundred American loggers will be needed. An estimated 105 million bd. ft. will be cut annually.

WHAT NEXT FOR FS?—Regional Forester A. W. Greeley says the big job now will be to get all the Alaska pulptimber sales into full operation. This involves planning of cutting operations, sales administration and the general development of logging and management techniques application to this country.

FS men who worked on the Sitka sale include Vernon Joyer, C. M. Armstrong, John E. Weisgerber, Lacy Johnson, John Sandor, Jack Shields, Howard Johnson and Greeley of the FS in Juneau and Sitka and R. E. McArdle, chief, E. P. Cliff, Ira Mason, A. W. Sump, Reynolds Florance and R. E. Tremain in Washington. E. L. Peterson, asst. secretary of agriculture, was also instrumental.

AERIAL VIEW OF TIMBER GEORGIA PACIFIC WAS AWARDED in Juneau pulptimber unit. This stand is at Spasski Bay on the north end of Chichagof Island. Except for trees which can be yarded to the beach from floating A-frames, most timber in picture appears adapted to truck logging. Chichagof is inhabited by the fabled Alaska brown bear. (U. S. Forest Service photo.)

A PULP & PAPER SPECIAL:

Sales Over, Alaska Enters New Era

With four permanent industries, Northland enters period of development—will determine future potentials

By B. FRANK HEINTZLEMAN
Governor of Alaska
(As told to a PULP & PAPER editor in Juneau, Alaska)

● When I was traveling up and down the country in the late 1920's and the 1930's, seeking to interest pulp and paper people in Alaska, one of the first persons I saw was the then President Graustein of International Paper Co. He became interested in Juneau and sent engineers there.

In fact, International Paper submitted a bid on the first Alaska pulptimber unit offered for sale, the Juneau unit. But it was outbid by the Chandler-Cameron Pacific Coast newspaper group.

As far back as 1920 some people showed considerable interest in getting a pulp and paper project going in Alaska. Among these was Jason Rogers, owner of a large New York paper; another was the Methodist Book concern, a large publisher of religious books and tracts. Both companies did considerable investigative and engineering work near Ketchikan.

The late Harry Chandler of the Los Angeles **Times** and late George Cameron of the San Francisco **Chronicle**, with whom I dealt in the late 1920's and early 1930's, were all but ready to go ahead with a newsprint mill to supply their own and other specified Pacific Coast newspapers. They had bid in the timber, surveyed the best power sites in the Juneau area, and had logging engineers look over the timber closely. This was between 1928 and 1932. But in the great depression, the project faded away, and by mutual consent the contract with the Forest Service was cancelled.

GOVERNOR HEINTZLEMAN, former Regional Forester of Alaska. His promise —"Any aid to the (pulp-paper) industry which can be given by the Territory, will have my careful consideration." He looks back on 40 years in Alaska in this article for PULP & PAPER.

CROWN ENTERS THE PICTURE— Crown Willamette (since merged into Crown Zellerbach) was investigating Alaska at the same time and was preparing to put a similar newsprint operation at Ketchikan. I worked with Don Meldrum and other Crown timber people, but mostly with President J. D. Zellerbach. The depression wiped out this project, too, and Crown's plans in Alaska were at least postponed until after World War II.

A financial group from San Francisco spent a substantial amount of money about this time investigating the possibility for newsprint at Thomas Bay near Petersburg. The group was headed by F. C. Daugherty, who later went extensively into petroleum production, and so the Petersburg project likewise failed.

The depression years would have been a good time for development when construction costs were lowest. Think for a minute of what a plant started here 20 or 25 years ago would be worth today!

Along came World War II and again pulp mill possibilities were delayed at least five years. After the war, Crown Zellerbach resumed its interest in Ketchikan. Ed Stamm, vice president in charge of the timber department, checked on timber and logging, and J. D. Zellerbach and other executives made personal detailed examinations on the ground.

They certainly did take a close look, but with them, it was apparently a question of where their money could be put to best use. With their mills in

Oregon and Washington ready for expansion and modernization, they put large investments in their existing plants, and purchased additional timber to support them. So they passed out of the Alaska picture.

FIRST CONTACTS WITH PUGET PULP—The next steps were contacts with Fred Stevenot and Lawson Turcotte of Puget Sound Pulp & Timber, and before long, President Frank Reichel of American Viscose Corp. became interested. I met frequently with the officials of the two companies and gave them information. I later had many conferences with the Eastern financial groups who were to assist in setting up the capital structure of Ketchikan Pulp Co. (The complete story of the Ketchikan enterprise, including a previous article by Mr. Heintzleman, is told in PULP & PAPER, Oct. 1954).

About the time Ossian Anderson started his first sulfite pulp mill in the State of Washington, many people in the East were skeptical that the West could turn out good pulp from Western hemlock. I had heard once, when I was in the New York office of a paper company, that Western hemlock would never make anything other than newsprint, and a gray newsprint at that. Some years later, I was there again when a sample came in from the West. It was a fairly high quality, bright sample, and everybody in that office was whooping and hollering, since it far surpassed their previous estimates of what could be done with Western hemlock.

PRIMARY INTEREST—PULP AND PAPER—I tried getting sawmill and plywood people interested in Alaska, too, but primarily I was contacting pulp and paper people. Actually, we always have wanted an integrated forest industry in Alaska. Right now, Alaska has a plywood plant and is getting more sawmills, but there is need for a shingle mill or two to utilize cedar.

BY COINCIDENCE, the son of the man who instructed Frank Heintzleman to try to develop the pulp industry in Alaska succeeded him when Frank became Governor of Alaska. ART GREELEY (pictured above), who currently occupies the position of regional forester for Alaska, is the son of Col. Wm. B. Greeley, Chief of the U. S. Forest Service from 1920 to 1928.

I got started 40 years ago on the trail of pulp mills in Alaska with the support of the then Chief of the Forest Service, the late Col. Wm. B. Greeley. He visited here and decided something had to be done with all the timber going to waste. He instructed me to study the timber, power and water supplies, and to do a selling job wherever I could find substantial and interested parties. I was then assistant regional forester in charge of timber management (later Mr. Heintzleman became Alaska's regional forester—Ed.). It was through Colonel Greeley's original leadership and support that I was able to devote my time to this work.

All of the successive Chiefs of the Forest Service and their Washington staffs were very helpful to us in getting pulp and paper firms interested. The same was true for the several Secretaries of Agriculture. E. W. Tinker of APPA also assisted us, while PULP & PAPER magazine has given very fine coverage of the possibilities and activities here.

BIGGEST TIMBER BLOCKS EVER OFFERED—One problem we had in setting up Alaska timber sale units for pulp mill use was that we found it necessary to offer blocks of timber about five times as large as any other sale the Forest Service had ever made. This was due to the large size mills needed and the extra construction costs in this region. Many complex problems had to be anticipated in drafting contracts for these multi-billion footage, 50-year sales of national forest timber.

Government agencies, such as the Geological Survey, went out of their way to cooperate with us. Aerial photographic flights of the U.S. Navy in 1926, 1929 and 1948 were very helpful in studying timber and power resources.

FURTHER SALES SHOULD BE POSTPONED—I always had great faith that we would arrive at the point where we are today: Alaska has one operating pulp mill at Ketchikan. Pulptimber allotments now have been sold to support 3 more enterprises at Wrangell, Juneau and Sitka.

I believe the Forest Service prefers not to consider any more Alaska pulp mills for at least 10 or 15 years. Existing and prospective pulp mills, sawmills, and plywood plants must have enough timber, and until it is definitely established that the timber here will support additional mills, the industry should not be expanded.

Now as governor, I, of course, do not now have any direct responsibility in connection with the pulptimber of Alaska, or anything to say about how it is to be used. That responsibility lies with Art Greeley, the present regional forester for Alaska. However, any aid to the industry which can be given by the Territory is given, and will continue to have, my careful consideration. The timber of our national forests constitutes one of the greatest resources of Alaska, and we want to see it brought into use as rapidly and as extensively as economic feasibility and good forestry practices will permit. On this, all Alaskans are agreed, and our legislature and territorial

LOOKING OVER MILL SITE. Taken by PULP & PAPER on the main street of Wrangell, the two men at left figure prominently in the future development of that town. Extreme left is FRED HANFORD, veteran legislator and public official in Alaska, Wrangell representative for Pacific Northern Timber Co. Next to him is C. GIRARD DAVIDSON, secretary of the company. They are gazing at site of the new forest industries site, which will include pulp mill.

Species	Volume in Millions of Bd. Ft.	Price Per M*
JUNEAU UNIT		
Sitka spruce	1,763	$2.80
Hemlock	5,610	1.70
Cedar	127	1.70
Total.....	7,500	
WRANGELL UNIT		
Sitka spruce	720	3.20
Hemlock	1,980	2.00
Cedar	300	1.70
Total.....	3,000	
SITKA UNIT		
Sitka spruce	1,417	2.90**
Hemlock	3,623	1.75**
Cedar	210	1.65**
Total.....	5,250	

* Includes K-V funds for timber stand improvement
** Advertised price

BOX SCORE ON TIMBER VOLUMES for pulp mills at Juneau, Wrangell and Sitka.

officers will, I am sure, do all in their power to smooth the way for timber-using industries.

POTENTIALS AT WRANGELL— Pacific Northern Timber Co. has a 50-year commitment for cutting rights on 3 billion bd. ft. in the 736,000-acre Wrangell unit. At the time of the bid, June 9, 1954, this sale ranked second to Ketchikan as the largest block of government timber ever sold. Pacific Northern's plans are for a diversified operation— first a modern sawmill, next a plywood plant and eventually facilities to make particle board and by-products. (Ed. note— Contract says 80 ton pulp mill must be built by 1963. Other plants to make chips).

History was made in mid-1955 when Congress passed a special bill authorizing Pacific Northern to purchase 45 acres of tidelands, a few miles south of Wrangell. In addition, the company owns 36 acres of adjacent uplands, giving them an 81-acre site. This was the first bill ever passed to allow purchase of tidelands.

PLANS AT JUNEAU—Robert Johnson of C. D. Johnson Lumber Co. of Oregon developed an interest in Alaska before that company was bought out by Georgia Pacific Co. Later Mr. Johnson and others organized Pacific Northern Timber Co. which was awarded the Wrangell unit.

Robert Johnson first interested Pres. Owen Cheatham of Georgia Pacific in Alaska. I first went down to Olympia, Wash., to talk with Mr. Cheatham and he personally spent much time thereafter in a study of the Juneau situation.

Georgia-Pacific Alaska Co., the wholly owned subsidiary of the Georgia Pacific Plywood, was awarded timber rights for a Juneau pulp mill. The company has until Dec. 31, 1958, to submit plans, and by July 1, 1959, principal items of machinery must be ordered.

President Cheatham had indicated their Juneau plans are closely tied in with a projected pulp mill at Toledo, Ore., where Georgia-Pacific was large holdings.

In lining up mill sites, we always tried to get them close to existing towns. The Fish Creek area on Douglas Island is well suited to Georgia Pacific's needs, and there are other good locations close to Juneau, at the village of Thane or on Douglas Island near the old Treadwell mine.

That is the story of how Alaska has attracted and won great forest products industries. **(See preceding story for the Governor's comments on Japanese timber award.)**

Buechler Heads Sales

Ralph M. Buechler has been promoted to sales manager of the Pulp and Paper Mill Machinery Div., of D. J. Murray Mfg. Co., Wausau, Wis., announces Arnold W. Plier, president and gen. mgr. Prior to joining Murrco in 1951, Mr. Buechler was connected with another machinery manufacturer. He is a graduate of Purdue.

Georgia Pacific Permit

Georgia-Pacific's power resources for its projected Juneau mill was bolstered Feb. 2 with issuance of a 3-year permit for a proposed hydroelectric project on Lemon Creek, 10 miles from town. Two dams are contemplated with a total installed hp of 6700.

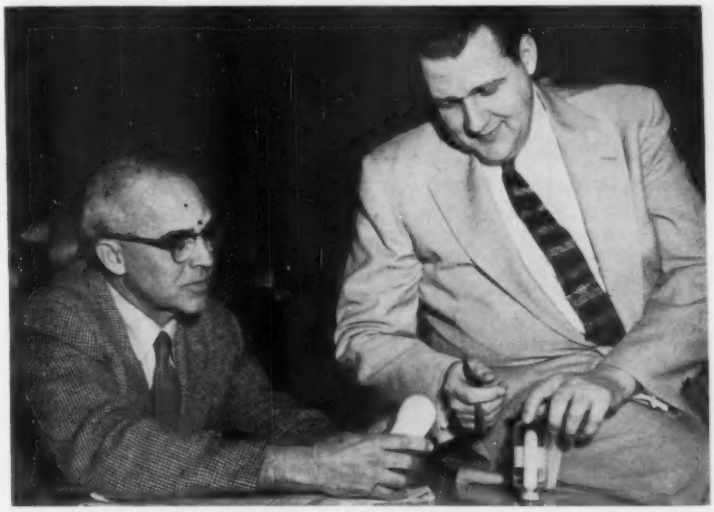
Murdock Medal Awarded 5 Japanese

The Murdock Medal has been awarded five leaders of the Japanese pulp and paper industry for outstanding services in 1955.

The medalists are: Heijiro Iwano, honorary consultant, Paper Making Library and Museum; Misao Murai, director, Daishowa Paper Mfg. Co.; Yoshio Mitsusawa, consultant, Oji Paper Co.; Seiichiro Iguchi, president, Japan Paper Processing Co., and Risaku Okawa, director, Okawa Pulp & Paper Research Institute.

Established in 1947 and named to honor many services to the industry of Japan by Harold R. Murdock, then a civilian specialist on General MacArthur's staff, the awards have become a permanent annual event in Japan. There have been 25 winners.

All Japanese in the industry, regardless of status or trade, are eligible. Mr. Murdock, only American to receive this Japanese award, is now retired. He resides at 516 Hascall Road. N.W., Atlanta 9, Ga.



Dow Names a New Coatings Sales Head

DONALD L. GIBBS (left), Sales Mgr. of The Dow Chemical Co.'s Plastics Dept., is discussing new duties assigned to M. H. P. (PAT) MORAND (right), in this special PULP & PAPER picture. Mr. Morand has been advanced to Manager of Coating Sales for Dow, succeeding Floyd J. Gunn, new Manager of Dow's Los Angeles office. Mr. Morand served since 1953 as Assistant to the Manager of Coating Sales. In his new capacity he will be responsible for marketing Dow coatings in the paper and paperboard industry and other fields. Headquarters will be in Midland, Mich.

Joining Dow in 1949, he served in coatings technical service and as coating salesman out of Chicago office. He graduated from U. of Cincinnati. He spent three years in Tokyo, where he helped supervise postwar operation of the Japanese chemical industry.

PICTURE NEWS of the INDUSTRY

Gentes and Sherwin Promoted At Hooker's Tacoma Plant

GEORGE A. GENTES (left) has been appointed Works Mgr. and ROBERT M. SHERWIN, Plant Engr., of the Tacoma, Wash., plant of Hooker Electro-chemical Co. A native of Buffalo, N.Y., Mr. Gentes, after graduation in 1941 from Cornell, joined Hooker's engineering dept., Niagara Falls, N.Y. He transferred to Tacoma in 1949. Born in Batavia, N.Y., Mr. Sherwin graduated from Calif. Inst. of Tech. in 1943. He joined the engineering dept. at Tacoma plant in 1951.

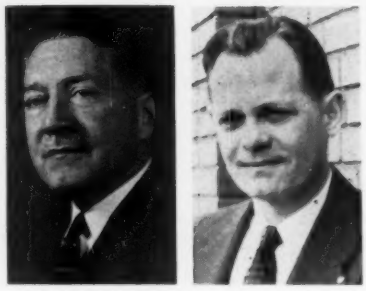
Figures in Industry News

LAURICE W. McCALLUM (top left), has ben named Technical Sales Rep. in the Southeast for J. M. Huber Co., a major supplier of papermaking clays. He is a graduate of Texas Technical College.

HENRY C. GOODRICH (top right), is new Vice Pres. of The Rust Engineering Co. He joined Rust in 1946 and later was Project Mgr. on construction projects. He will now be in charge of sales and estimates at Birmingham, Ala., office. He was born in Fayetteville, Tenn., graduated from U. of Tennessee.

J. H. SHUMKA (lower left), Alberta-born chemical engineer, formerly with B.C. Research Council and Columbia Cellulose Co., before joining MacMillan & Bloedel as Project Chemist for the Harmac Pulp Division, has succeeded D. H. Baker as Technical Supervisor, at Harmac (B.C.). Mr. Baker recently joined B.C. Forest Products.

C. W. DAVIS (lower right), is new Asst. Tech. Supervisor at Camas mill of Crown Zellerbach, succeeding James E. McCourt, who became Technical Supervisor.



In New Positions at Inland Empire

WM. B. HYDE (left) a Director since 1949 and former Vice Pres., has become President of Inland Empire Paper Co. at Millwood, Wash., just outside of Spokane. Chester Buckland, longtime President and General Manager, has retired, after over 44 years' service.

DEAN H. BANTA (right) advanced from section hand on the company railroad during summer vacations through Purchasing Agent and Asst. Mgr. to General Mgr. and a Director. His father, from Wisconsin, was a Pulp Mill Supt.

F. H. Orbison Becomes President; Younger Joins Appleton Woolen

F. HARWOOD ORBISON (left), has been elected to President of Appleton Woolen Mills, succeeding Mrs. T. E. Orbison who continues as a Director. Mr. Orbison, at 35, is youngest head of 75 year old firm and its 6th Pres. His former position of Gen. Mgr. was eliminated. He was bomb disposal officer in the war, attended Cornell and Harvard Business School and was Prod. Mgr. and Asst. to Gen. Prod. Mgr. of other industries before joining Appleton Woolen. Albert Wickesberg was reelected Chairman; Mrs. E. T. Nelson, Vice Pres., Allen Thuerer, Secy., and C. P. Heeter, Treas.

FRANK B. YOUNGER (right), 34, is the newest member of the Appleton Woolen sales staff. He will cover Wis., Minn., and Upper Mich. He formerly was with Appleton firms serving paper industry since graduating from Ripon College.

Elected to New Hooker Posts

THOMAS E. MOFFITT (left) has been elected Exec. Vice Pres. and Director and R. WOLCOTT HOOKER (right) has been elected Senior Vice Pres. of Hooker Electrochemical Co., announces Pres. Bjarne Klaussen. Mr. Moffitt has been Vice Pres. in charge of Western Operations, with headquarters at Tacoma, Wash. Mr. Hooker has been Vice Pres., Director and member of the Finance Committee at headquarters, Niagara Falls, N. Y.

Born in Wallace, Ida., Mr. Moffitt graduated from Cornell in 1922. He joined Hooker in 1930 at Tacoma as Asst. Western Sales Mgr. He also has been Tacoma Works Mgr.

Mr. Hooker was born in Chicago, graduated from Cornell in 1921, joined Hooker in 1922 as a salesman. He became Vice Pres., Sales, in 1941, and in 1953, Vice Pres. for Purchasing and Public Relations.

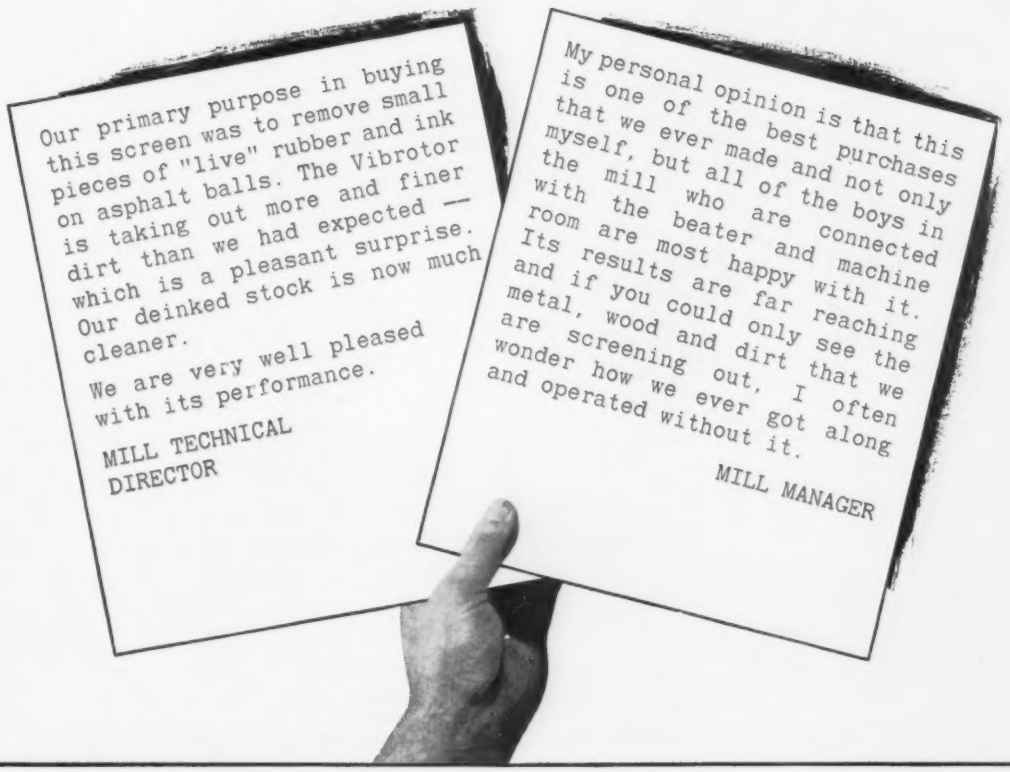
Kirby Heads New Esco Office; Forrest Promoted by Rayonier

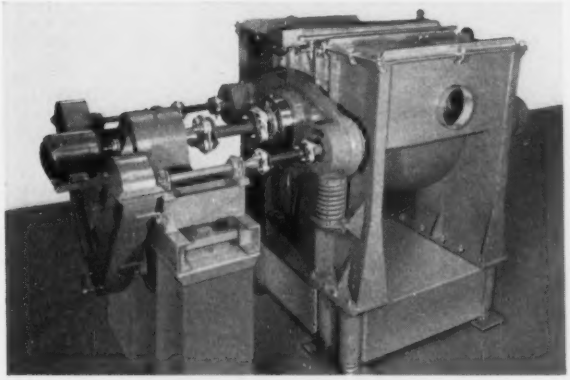
TOM P. KIRBY (left) is Mgr. of Electric Steel Foundry Co.'s new Central Sales District at Danville, Ill., handling Esco stainless, high alloys and cast specialties for Central and Southern states, and all construction, logging and sawmill equipment east of the Rockies. He formerly managed Gulf, Atlantic and Midwest branches which are now included in the Central district. R. D. Babbitt, who served as Mgr. of predecessor Chicago sales branch, now devotes full time to managing an enlarged Esco Danville manufacturing plant (new address: 1017 Griggs St., Danville, Ill.).

L. J. (LEN) FORREST (right) has been named Asst. Mgr. of Northwest Timber Div., Rayonier Inc., at Hoquiam, Wash., it is announced by James T. Sheehy, Exec. Vice Pres. Mr. Forrest reports to M. B. Houston, Mgr. at Seattle. Mr. Forrest was born in Tacoma, started with Polson Logging Co. in 1923 while attending Washington State College, and was an officer when Rayonier acquired Polson in 1945. All of the more than 400,000 acres of forest land in Washington owned or operated by Rayonier are under sustained yield management under him.

You'll Share These Opinions When You Install

BIRD VIBROTOR SCREENS


Our primary purpose in buying this screen was to remove small pieces of "live" rubber and ink on asphalt balls. The Vibrotor is taking out more and finer dirt than we had expected — which is a pleasant surprise. Our deinked stock is now much cleaner.
We are very well pleased with its performance.
MILL TECHNICAL DIRECTOR
My personal opinion is that this is one of the best purchases that we ever made and not only myself, but all of the boys in the mill who are connected with the beater and machine room are most happy with it. Its results are far reaching and if you could only see the metal, wood and dirt that we are screening out, I often wonder how we ever got along and operated without it.
MILL MANAGER



Bird Vibrotor Screens are in operation on bleached, unbleached, semi-chemical, high density, dissolving pulps, deinked and other stocks. They deliver big tonnages, handle high consistencies, take up minimum space, call for minimum maintenance.

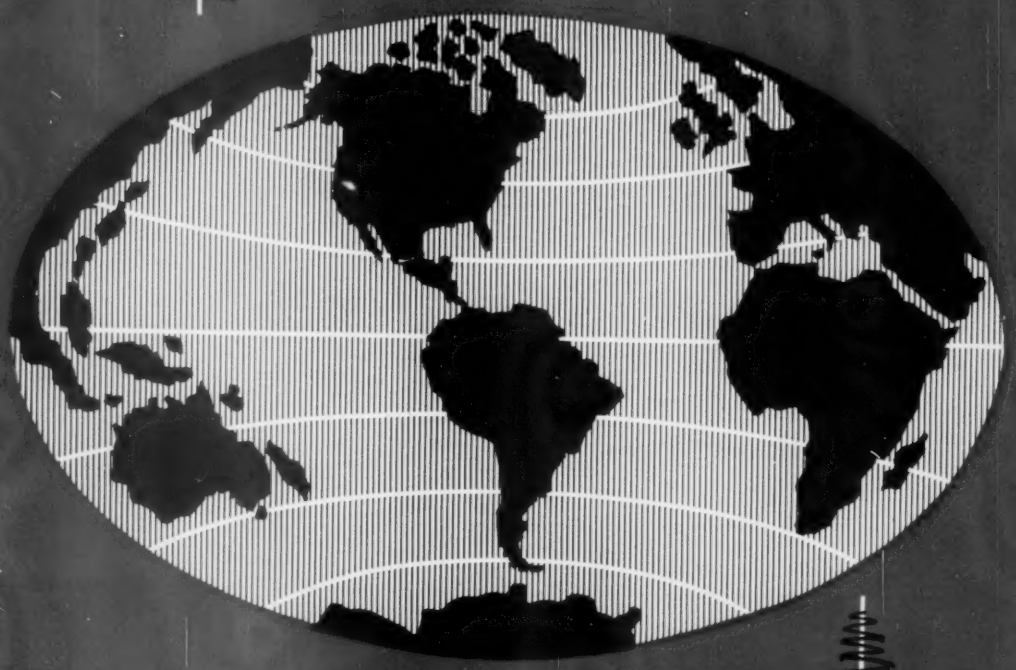
Ask us to tell you just what the Bird Vibrotor Screen can do for you.

BIRD MACHINE COMPANY

SOUTH WALPOLE, MASS.

REGIONAL OFFICES: EVANSTON, ILLINOIS
PORTLAND, OREGON • DECATUR (Atlanta), GEORGIA

WOOD PULP PAPER



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Plans Multiply in South!

• In the South, the biggest expansion news of the month was Gunnar Nicholson's surprise announcement of the new Tennessee River Paper Co., which is to be a really large pulp and paperboard mill, expected to specialize in linerboard. The Tennessee River is a long one and the new industry is apt to be anywhere along its course—and that course is long and wends into fine forest areas of Northern Alabama.

The announcement didn't reveal Mr. Nicholson's associates, but he is president of a well-organized and well-heeled new firm, and in fact, it is understood its product is already sold for a long period ahead.

Union, with expansion plans of its own, moved fast to pick his successor as vice president in charge of future planning, Wilton D. Cole. Robert Inman, chief engineer at Savannah, and A. Lawson Sopp, assistant comptroller, form a new planning committee with Mr. Cole.

MORE NEWSPRINT—UP TO PUBLISHERS—With the rise in newsprint prices still commanding newspaper headlines, Union and Hudson Pulp & Paper Corp. have both announced they are willing to build new mills at $25 million or more, if they can get sufficient support from Florida or other newspapers. Hudson would build at Palatka, Fla., where it is just now adding a bleach plant, more pulp and other additions.

Newspaper publishers appointed a committee to work on it. Union announced it would construct a newsprint mill somewhere in the South. An industrial engineering firm has been making a study for its expansion in this field.

THIRD MACHINE AT BOWATERS—Expansion, meanwhile, continues throughout the South. New construction at Bowaters Southern mill in Tennessee started Jan. 3 and contractors estimated the work—which will double capacity at the mill—will be completed about July 1. Extension will house a third Beloit newsprint machine.

AT COOSA RIVER—A. G. Wakeman, president of Coosa River Newsprint Co., also announced that partial completion of expansion at its Coosa Pines, Ala., mill will enable the company to fulfill newsprint contracts for 1956. A Beloit machine announced as the widest and fastest newsprint machine in the world, will be concluded by 1958 and boost Coosa production to 260,000 tons a year.

AT BOGALUSA, TOO—A Crown Zellerbach-Gaylord team is surveying for proposed expansion at the Bogalusa mill owned by CZ. Work is rushing on much new capacity going into production in next 11 months at Southland Paper Mills, Hodge, La., division of Robert Gair, Mobile mill of International, Hudson at Palatka—five new machines among them. Dierk Forests, one of the South's biggest timber owners, is definitely going ahead with kraft paper.

NEWNAN, GA., PLANT—Marathon Corp., with a new big mill site at Myrtlewood, Ala., and owners of a railroad there, has announced it will begin production next fall of plain, unprinted cartons for frozen food and other food package industries in a leased factory at Newnan, Ga., 40 miles south of Atlanta. The plant occupies 40,000 sq. ft., is now occupied by International Latex Corp. which moves into new facilities. Site will be serviced by Atlanta and West Point Railroad which is linked by connecting rails with the Meridian and Bigbee Railroad, purchased last August by Marathon, serving its pulp and paper mill site at Myrtlewood, Ala.

ST. REGIS AFFILIATE—A modern plant for the manufacture of fibreboard shipping containers, particularly for fruits and vegetables, is being constructed at Jacksonville by Growers Container Corp. of Salinas, Calif. The plant will have a capacity of 35,000,000 containers a year, both corrugated and solid fibre, and associated products. Production is to begin by mid-summer. The plant will be near the paper mill of St. Regis Paper Co., which recently acquired a substantial stock interest in Growers Container.

NEW "SMALL" MACHINE FOR VALDOSTA—Workmen are putting the finishing touches on a new 84-inch trim "small" machine, part of expansion at National Container's Valdosta, Ga., mill. Machine is expected to produce about 100 tons a day. It will be in operation soon. Main Bagley & Sewall machine, which trims 220-in., has produced as high as 671 tons in a day. New machine is constructed from parts of several different types of paper machines.

MIAMI PLANT—Miami National Container Corp. (an NCC subsidiary)

Expansion Brings Promotions

Promoted in Consolidated

L. W. (LARRY) MURTFELDT (left) is new Asst. Mill Mgr. of Wisconsin Rapids Div., Consolidated Water Power & Paper Co., announces C. E. Jackson, Mgr. of the Div. and Prod. Mgr. of Book Mills. Mr. Murtfeldt, a grad of Washington U. School of Engr., St. Louis, has been with Consolidated as Pulp Supt. and other capacities 23 years. He is succeeded as Pulp Supt. by JOHN F. NATWICK (right), who is a grad of Wisconsin, with the company 21 years, recently as Bleach Plant Supt. He belongs to a family famed in this industry.

Promotions by Scott in East

D. JOSEPH DUGHIE (left,) Mgr. of Scott Paper Co.'s South Glens Falls, N. Y., plant, after a 3 months' advanced management course at Harvard, will be assigned to Scott headquarters, Chester, Pa., as Mgr. of Industrial Engineering. Replacing him as South Glens Falls Mgr. is ALBERT N. GARRETT (right), who has served as Mgr. at the Sandusky, O., plant of Scott since 1953. Moving up as Plant Mgr. at Sandusky is Ralph Wythes, who has been Prod. Mgr. at the Scott wax paper plant, Hoboken, N. J.

One of 165 Camas Service Pins

G. J. TICOULAT (right), Vice Pres.-General Paper Sales, Crown Zellerbach, presents 40-year award to Yard Supervisor BILL PALMER. Seated between them G. H. GALLAWAY, Res. Mgr.

is building a new corrugated paper box plant in Miami, Fla., to be completed about June 1. Located on a ten-acre plot at 3700 E. 33rd St., Hialeah, it will cover approximately 110,000 sq. ft. A smaller present Miami installation will be sold. Lee Lebow is vice president and sales manager and Charles Ordintz, production manager. It will serve the Florida citrus industry and box markets in Venezuela, Puerto Rico and Mexico.

NEW FELT MILL—Rapid progress is being made in the new felt mill, marked by laying of the cornerstone, for F. C. Huyck & Sons at Aliceville, Alabama. The cornerstone laying was attended by C. V. Spencer, vice president in charge of operations for F. C. Huyck & Sons; C. W. LaDow, who will manage the Aliceville mill, officials, etc.

GAIR ACTIVITIES—The Beloit machine for Hodge, La., is due to start up next February. The Port Wentworth, Ga., division of Robert Gair should complete rebuilding of its machine for added production this month.

ALUM, ACETIC ACID PLANTS—General Chemical Div. of Allied Chemical & Dye Corp. is constructing its 24th liquid alum plant at Hopewell, Va. It will service pulp and paper mills in the area.

Take Over New Everett Duties

DR. LOREN V. FORMAN (left), former Wisconsinite and formerly of Institute of Paper Chemistry, is new Gen. Mgr. of Everett, Wash., operations of Scott Paper Co., as announced by Paul C. Baldwin, Vice Pres. in charge of all West Coast mills. Dr. Forman has overall responsibilities over the expanded pulp mill, new 4-machine paper mill and converting, technical control, engineering, traffic and personnel.
N. W. (BILL) COSTER (right), continues as Pulp Mill Mgr. and in addition, during absence of Dr. Forman, will be Acting Gen. Mgr.
Accounting, purchasing, log procurement, staff traffic and office service continue under Chas. D. Dickey, Jr., Administrative Asst. to Vice Pres. Baldwin; the two Coos Bay Corp. mills under Leo S. Burdon, Asst. Vice Pres., and Philip E. Coleman continues as Industrial Relations Mgr.

First commercial plant for recovery of acetic acid from sulfite semichemical liquor will be installed at Sonoco Products, Hartsville, S.C., as part of a $7,500,000 expansion. Plant is expected to eliminate black liquor discharge in Black Creek. It is basically designed and patented by Sonoco.

EXPANSION AT 3 MORE MILLS—Also for Sonoco is a new 170-in. paper machine for corrugated medium which will be built in cooperation with F. J. Kress Co., Pittsburgh, Pa. Kress will take all output for corrugated boxes. Machine will be No. 10 for Sonoco and is to be operating in 18 months. Capacity will be 175 tons a day.

At Mobile, Ala., Stone Container Corp. has started a half-million dollar expansion program. Included is a 1200 gal. Sveen-Pedersen flotation separater to salvage fines already in operation.

For Brunswick Pulp & Paper Co., work continues on a new Stebbins 150-ton high density storage chest for bleached pulp and a new 11th digester. Pumps and agitators are Impco.

Expansion Elsewhere I.P. May Expand in Far West

Everywhere there is more expansion!

I. P. IN WEST—At long last, it appears that International Paper Co., with numerous mills in the East and South, is going to the Far West. It has opened merger talks with Long-Bell Lumber Co., one of the biggest forest products companies in the world, with sawmills at Longview, Wash. (a town it laid out in same style as Washington, D.C.), Weed, Calif., Vernonia, Gardner and Eugene, Ore. It is probable that a pulp and paper mill may be built in Oregon.

Long-Bell owns nearly 3 billion bd. ft. of timber, produces about 3½ million bd. ft. of lumber annually. I.P. lost a bid for Alaska timber some 30 years ago (but the winner later abandoned its award). That was I.P.'s last serious interest in the Far West. Long-Bell already makes chips for sale.

New B.C. Mill To Get License

ANOTHER MILL FOR BRITISH COLUMBIA—John Bene, president of Western Plywood Co., says when the Sloan Forestry Commission finishes hearings, his company will get a government license to build a pulp mill at Quesnel Lake, B.C., where it has one of its plywood plants.

As St. Regis pushes for an Apr. 1957 target for the North Western bleached kraft mill at Hinton, Ala., another Alberta pulp mill is planned

New Executives at Charmin Mills

PAUL LEIGH (left), is new Power Supt. for all divisions of Charmin Paper Mills and DONALD SCHULTZ (right), is new Research Director, announces J. M. Conway, Pres. and Gen. Mgr. Mr. Leigh is former Consulting and Application Engineer with Westinghouse, Chicago, was born in Berlin, Wis., and graduated from Marquette. Mr. Schultz graduated from the U. of Washington, Seattle, native of Green Bay. Vice Pres. M. J. Auchter is Chairman of a steering committee for the new research program. Clyde Faulkender continues as Tech. Director.

near White Court, 100 mi. north of Edmonton by Antler Wood Products, Inc. M. A. Miles is president; William Zeidler is executive v. p., both of Edmonton. The latter says $20,000,000 will be spent, starting this year.

A $2,000,000 plant for making building board from wheat straw in Saskatchewan, is planned by a syndicate headed by Ray Hauer, president of Allied Securities, Ltd., Saskatoon. They expect to buy straw at $10 a ton within 20 mi. of Saskatoon, where 25,000 tons is reported available annually.

Fibreboard Products Inc. will put $3,000,000 in new building and equipment at Antioch, Calif., to double corrugating case capacity there. Includes an 85-in. electronically-controlled corrugator, printer-slotters, tapers, etc.

A new Diamond Match molded pulp products mill will be built in Northern California at a new site. Also, it is pushing ahead with a wood products plant at Red Bluff, Calif., including log barker and chipper.

Beloit Iron Works is building a 4th tissue machine for Pacific Coast Paper Mills, Bellingham, President F. J. (Bill) Herb told PULP & PAPER. It will start up in December, in a new building. It will make mostly pink, but also yellow and green MD and powder room tissues. It will add 40% to 50% to total production at P.C. Mills.

RAYONIER'S BIG INVESTMENT—Rayonier Inc. has spent over $100,000,000 since World War II to build new mills and plant and modernize facilities. It has completed a $450,000 pulp finishing room modernization at

the Hoquiam, Wash., mill, adding a new 528 fpm Lamb Grays Harbor pulp cutter, cutting two 5½ ton jumbo rolls at a time. Pushbuttons and lever throttle, for speed, control it.

A new $3,250,000 woodroom for the Hoquiam, Wash., mill will be in operation by spring 1957. Limits for whole log chipping will be raised from 18 to 30 in. (See PULP & PAPER's story on Rayonier's Port Angeles modern woodroom, Jan. 1956 issue, PULPWOOD SECTION.)

NEW G-P CO.—Georgia-Pacific Plywood Co. has formed G-P Paper Co., with Stuart Daniels, formerly Union Bag executive vice pres., as president, to build a kraft paper and board mill at Toledo, O.

NEW IDAHO MILL?—A new pulp mill in Southern Idaho is reported in the works, being considered by present large timber operators.

With the news that Puget Sound Pulp & Timber Co. has recommended a 3-to-1 stock split, pending stockholders' approval Apr. 17, following closely upon a 4-to-1 split by Weyerhauser, the pulp world had some interesting developments. The jointly owned Rhinelander and Weyerhauser glassine mill at Longview may start up by June or early summer.

DISSOLVING PULP—American Viscose Corp., largest user of dissolving pulp in the world, and partner with Puget Pulp in the Ketchikan, Alaska, mill plans a new cellophane plant of 50,000,000 lbs. capacity annually at Marcus Hook, Pa. It has a 100,000,000 lb. plant at Fredericksburg, Va. Amvisco is using Ketchikan pulp, to date, for other products than cellophane. Of course, woodpulp is widely used as raw material for cellophane.

However, Amvisco also is expanding rayon staple capacity. Courtalds is increasing its rayon staple plant at LeMoyne, Ala., to 150,000,000 lbs. per year. American Enka Corp. is building a new rayon staple 50,000,000 lb. plant in Lowland, Tenn. But DuPont has reduced somewhat its rayon staple and rayon yarn output. Dissolving woodpulp is basic for these products, of course.

International Paper Co. has increased machine coated paper output at Hudson River Mill, Palmer, N.Y., by 35,000 tons annually. No. 3 machine was converted from groundwood at cost of $1,750,000 and now all three machines make machine coated, rated at 100,000 tons a year.

Crystal Tissue Co., Middletown, O., has ordered a new Black-Clawson Fourdrinier machine for delivery by mid-1957. Adds 25% to tissue tonnage. This will be the biggest single capital investment in Crystal's history. A new steam generator increased capacity by 160%.

CHEBOYGAN MILL SALE SUIT—Sale of the long idle Cheboygan, Mich., mill, which has two 136 in. (124 in. trim) Fourdriniers and a deinking plant, to Charmin Paper Mills, of Green Bay, Wis., is being contested. The Cheboygan community has been interested in getting this 100-ton mill producing again after bankruptcy. I. Lawrence LeSavoy, present owner of the mill, filed suit against the sale in N.Y. federal court.

A chlorine dioxide bleach stage and two more 8-ton digesters are being added for Nekoosa, Wis., sulfite pulp by Nekoosa-Edwards.

The Mead Corp. is planning a new bleach plant and other additions at Kingsport, Tenn.

Lyons Falls Paper Corp. is now full owner of Gould Paper Co., Lyons Falls, N.Y., which had been jointly owned by the Rockefellers, a Brazilian group and Lyons Falls.

Stone Container Corp., Chicago, a new subsidiary, Western Paper Box Co., Detroit converters. Crown Zellerbach also added a converter, Waxide Paper Co., with plants in Kansas City and St. Louis.

ST. REGIS OVER QUARTER MILLION MARK—St. Regis Paper Co., with its new subsidiaries, totaled net sales of about $257,000,000 in 1955, compared with $200,090,143 for 1954. The new figure includes 7 months sales of Pollock Paper Corp., 4 months for General Container and 9 months for Michigan Panelyte Molded Plastics, all merged units. Profits were $39,250,000 compared with $28,048,529 in 1954. St. Regis stays up with the Big Five in sales—I.P., Crown Z (includes Gaylord Container), Kimberly-Clark (includes International Cellucotton) and Scott.

New Assignments in St. Regis

LESTER J. (LEFTY) SMITH (left) has been named Asst. to John A. McDermott, Manager of Paper Production for all St. Regis Paper Mills in South, Midwest, Far West and East. Mr. Smith, who formerly was Supt. with Combined Locks and St. Regis at Kalamazoo, continues as Gen. Supt. of St. Regis Paper Mills in Deferiet, Carthage and Herrings, N.Y.

S. KEPPLE PRATT (right) is new Gen. Supt. of both Pulp and Paper operations at St. Regis mill in Tacoma, Wash. He moves there from Jacksonville, Fla., where he was Asst. Mill Mgr. under Mr. McDermott. Mr. Pratt is a Carnegie Tech graduate and formerly was with West Virginia Pulp & Paper Co.

Clines is New Western Manager; Perry Moves East to Major Post

WILLIAM M. CLINES (left), is new Western Sales Mgr. of Heavy Chemical Div., American Potash & Chemical Corp. His headquarters, 3030 W. 6th St., Los Angeles. Succeeds W. J. F. FRANCIS, now Vice Pres. of Sales (picture and story, P & P, Feb., page 91). Mr. Clines hails from Kentucky, had years of contacts with pulp and paper field as Northwest Mgr. in Seattle for General Chemical. He held Pacific Coast Squash championship.

HOWARD M. PERRY (right), District Turbine Specialist and Engineer in General Electric offices in Seattle and Portland, Ore., since 1945, has been promoted to Manager-Product Services, Small Turbine and Supercharger Dept., General Electric Co., Fitchburg, Mass. He is a native of Denver, Colo., joined G.E. when he graduated from Colorado in 1939. Moved from Portland to Seattle in 1951.

St. Regis and Rhinelander Prepare for Merger

The way was apparently being cleared for merger of St. Regis Paper Co. and Rhinelander Paper Co.

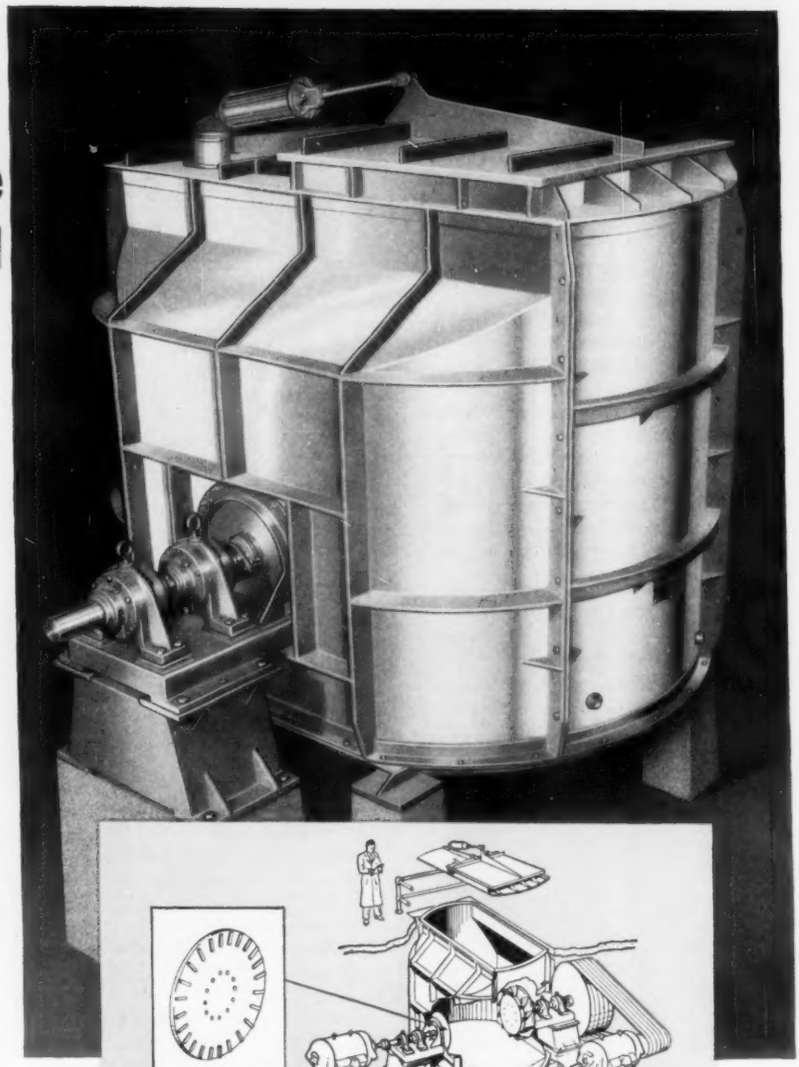
Rhinelander stockholders were informed that St. Regis will make them an offer pursuant to a printed prospectus and registration statement to be filed with the securities commission. The offer will be to exchange authorized St. Regis stock on a share-for-share basis for Rhinelander stock.

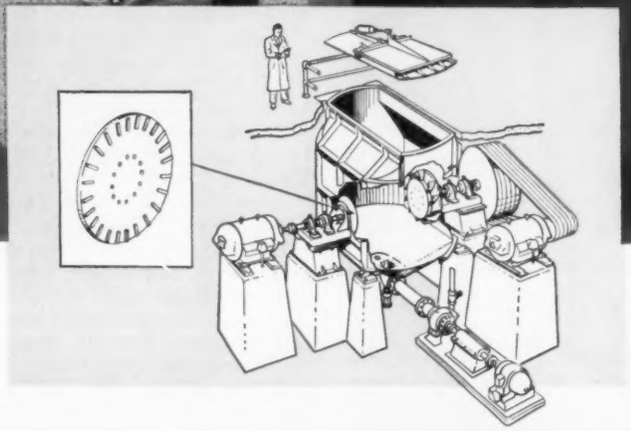
Joseph S. Daniels, who has been the largest stockholder in Rhinelander Paper Co., has given the majority of his stock as a gift to the University of Wisconsin Medical School, creating a $1,170,000 trust fund for that institution.

Mr. Daniels continues as a director of Rhinelander. He is vice president of Daniels Mfg. Co., Rhinelander, Wis., one of Rhinelander Paper's biggest customers. His father was a founder of the paper company.

Jones HI-LO PULPER

Completely defibers in less than half the time of conventional pulpers.





Here's the answer to the problem of pulping waste news, wet-strength broke, and other hard-to-treat material.

The unique feature of the HI-LO Pulper is its *two* rotors . . . a large-vaned Lo-Speed one for initial break-up and thorough circulation; a small-vaned Hi-Speed one for complete defibering in minimum time with most efficient use of horsepower.

The HI-LO, will completely separate fibers without cutting. Actual tests show substantial improvement in tear; and in many cases, it will produce treatment on wood pulps superior to a Hollander Beater. Ask your Jones representative for details, or write for Bulletin No. EDJ-1063.

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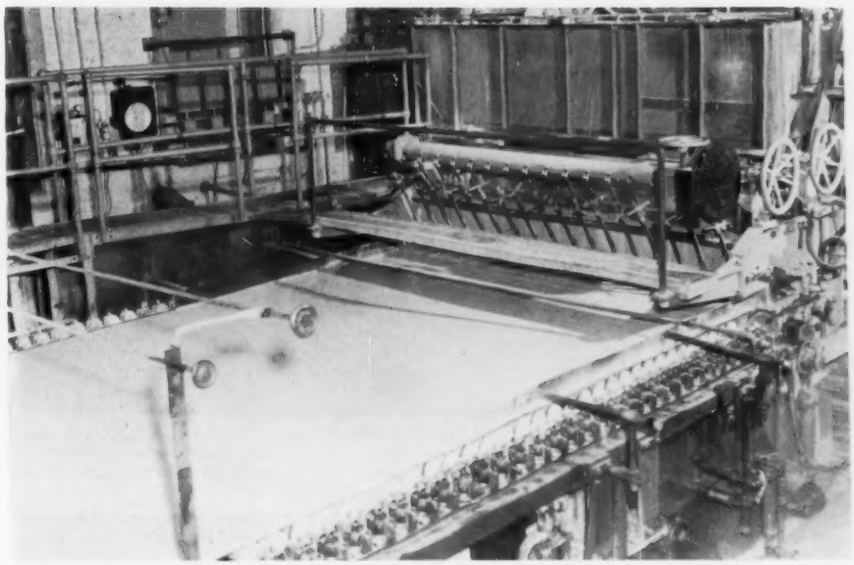


NEW HEADBOX AND SLICE SPELL MORE ACCURACY—Valley Iron Works headbox and inlet on No. 4 machine at Fox River Paper Corp. Due to large variety of weights and grades, very accurate slice, lips and baffle adjustments prove effective in controlling physical strength, formation and curl properties of great range of furnish.

A Fine Paper Mill Improves Quality

What Fox River Paper Corp. did to increase production; many benefits resulted from changes made at Appleton mill

BY H. P. (PHIL) DIXSON
Vice Pres. in charge of Mfg., Fox River Paper Corp.
(Written especially for Pulp & Paper)

● Fox River Paper Corp., has taken new steps to improve quality and increase production of fine papers.

Major improvement at our Appleton (Wis.) operations was changing over from steam to electrical drives. The electrification of No. 4 and No. 5 machines, where all production is now concentrated, was achieved with new equipment of Reliance Electric & Manufacturing Co. This change was decided upon as a result of engineering surveys and accomplished economically and efficiently.

A new Valley Iron Works headbox and inlet was provided for No. 4 machine. Due to the large variety of weights and grades manufactured on this machine, Valley supplied very accurate slice, lips and baffle adjustments that have proved highly effective in controlling physical strength, formation and curl properties of the wide range of furnish characteristics we must deal with.

Valley previously supplied a new headbox and inlet for No. 5 machine, in late 1954.

OTHER NEW EQUIPMENT—Stepping up production potentials of both No. 4 and No. 5 machines are extra Bird Machine 3-A screens, one for each. These allow us to reduce the screen slot size, thus reducing fiber knots that are quite troublesome in production of cotton content papers.

New Industrial Nucleonics Accu-Bay basis weight continuous gauges on both machines not only provide uniform weight, which is important to our customers, but have brought about marked improvement in uniform calendering, have decreased our weight change time, resulted in less broke from our air dryer and reduced cutter wrinkles. All this has meant a marked decrease in finishing room shrinkage.

ALL PIPING IN STAINLESS—Installation of the new headboxes and inlets, screens and rearrangement of our savealls called for practically all new re-piping with the machine wet end, done in stainless steel.

Our program of plant improvement for 1955 alone was about $375,000.

SURVEYS SHOWED NEEDS—Engineering surveys of the steam/electrical balance in our Telulah mill indicated the desirability of electrifying No. 4 and No. 5 machines which were driven from steam turbines. Surveys were made to find the most economical and efficient means of providing electric drives.

H. P. (Phil) DIXSON, who wrote this article especially for PULP & PAPER, noted many improvements achieved by changes made at Fox River Paper Corp. He is Vice Pres. i/c Mfg. Other Fox River officials are David E. Oberweiser, Chairman; William Roberts, Pres. and Gen. Mgr.; Harley O. Barney, Treas., Pur. Agt.; A. G. Beaman, Supt.; M. A. Buhner, Chief Engr. (new member of staff last Nov. 1); L. J. Small, Personnel Dir.

No. 4 machine is about 106 in. wide and consists of eight major sections. Maximum speed of this machine was set at 500 fpm and the minimum speed at 50 fpm.

No. 5 machine consists of nine major sections and has an average overall width of 94 in. Maximum operating

speed is set at 500 fpm with a minimum of 50 fpm.

Both machines were equipped with line shafts driven by turbines operating through suitable reduction.

HOW DECISIONS WERE MADE—In selecting horsepower for the drives it was somewhat impractical to use steam consumption in the turbines as a basis because of the unknown existing efficiency of the turbines. TAPPI factors were used with slight modifications because of bearing conditions on certain sections of the machine. Dryers, calenders, and other sections are equipped with plain bearings. Torque requirements increase at lower speeds because of the loss of lubricating qualities in these bearings.

It was decided that 125 hp would be ample for each machine. From the standpoint of maintenance and stocking spare parts, it was decided electrical drives would be duplicates throughout.

MOTORS AND DRIVES—The drive motor for each machine consists of Reliance 125 hp, 1200 rpm, 230 volt, direct current, ball bearing motors equipped with a filter-blower combination to provide suitable ventilation at low operating speeds. Each motor was mounted parallel to its respective line shaft. Because of the difference in the ratio of line shaft rpm to paper machine speed in feet per minute, two different ratios of Link-Belt silent chain drives were used to connect the motors to the respective line shafts. In each case 1200 rpm of the motor corresponded to a maximum machine speed of 500 fpm.

These motors were powered by Reliance V°S paper machine drives. The units consisted of a heavy floor type steel enclosing cabinet with two sets of double doors on each side and a filter compartment on one end and mounting therein all of the necessary components for providing proper control to the paper machine drive motors. A-c power was furnished from the mill 440 volt, 3 phase, 60 cycle lines and brought into the cabinet to an a-c starter controlling a squirrel cage motor on the variable voltage motor-generator set also mounted inside the cabinet.

CONTROLS ARE SIMPLE—The d-c controls consist of a d-c contactor, overload relay, and the necessary sequencing and programming relays and adjusting resistors. Close speed regulation on these machines is controlled by an electronic VSR speed regulator.

The signal for the electronic regulator is obtained from a small tachometer generator mounted on and direct coupled to each machine drive motor. The electronic regulator is a very high gain unit with anti-hunt and forcing circuits. The reference signal is obtained through a very accurately controlled electronic circuit which filters out any changes relative to variations in an a-c voltage or frequency.

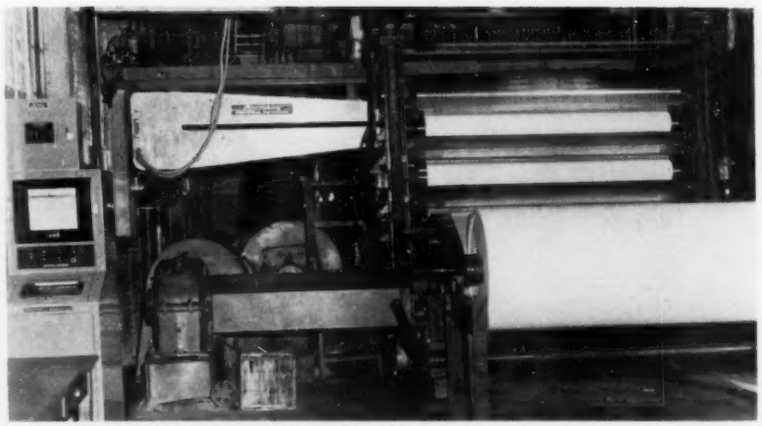
The two V°S cabinet paper machine controllers were mounted in a location provided by the mill remote from the paper machine. The units are self-ventilating through filters so that no additional means of ventilation is required for same, the only requirement being that the room temperature which these units are mounted be kept within reasonable temperatures.

OPERATION IS SIMPLIFIED—Each machine is equipped with a small operator's panel mounting on it an ammeter for visual indication of machine load, a speed indicator for visual indication of machine speed, a speed selecting and adjusting dial for setting and adjusting the machine speed and three pushbuttons having the functions of "Crawl-Start-Stop."

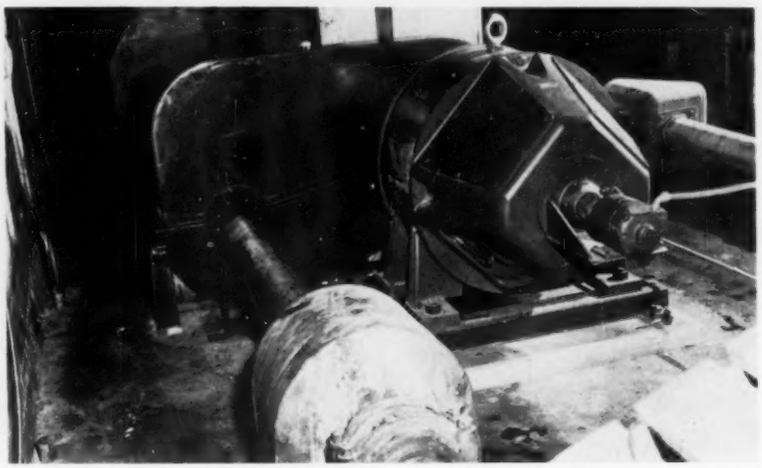
The "Crawl" button provides a preset low speed for wash-up purposes.

The "Start" button will cause each respective drive to start at low speed and accelerate under a predetermined rate of acceleration until the speed corresponding to the setting of the dial on the operator's panel has been reached. The drive will then continue to operate at this speed maintaining extremely close speed regulation under varying conditions of load.

When different grades of paper are run on the machine the operator resets the speed setting and adjusting dial to the new desired operating speed. A predetermined rate of speed change has been built into the electronic equipment so that speed changes on the machine are made at a rate commensurate with best machine operation.



A TRAIN OF IMPROVEMENTS FROM THIS—Industrial Nucleonics Accu-Ray continuous recording basis weight gauge on No. 4 machine improved uniform calendering, decreased weight change time. Less broke from air dryer and cutter wrinkles results in decrease in finishing room shrinkage.



HOW NEW DRIVE IS CONNECTED—One of Reliance d-c motor drives connected to the floor level Beloit paper machine line shaft assembly. Drives have increased machine speed and improved speed regulation.

Protection for steel structures that defies the weather

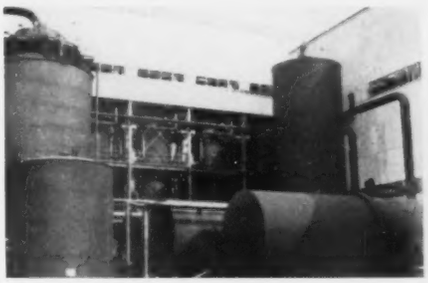
ERKOTE® Mastics

The maintenance-free coatings that are guaranteed to resist severe climatic conditions

Hoquiam, Washington — Typical storage tanks in Pulp Mill area coated with Erkote Mastic.

In these mills in the Northwest and South, Erkote Mastics protect operating equipment for Rayonier Incorporated, large producer of chemical cellulose pulp

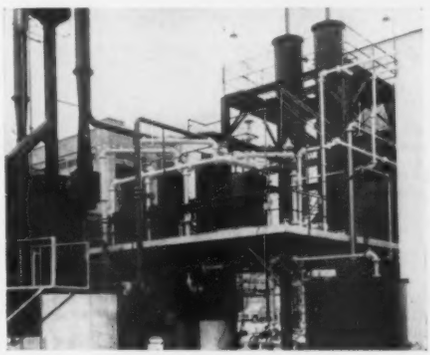
Seasonal climatic conditions that are cool and damp in the Northwest and hot and humid in the South demand effective protection for steel structures exposed to the weather. At its chemical cellulose mills at Port Angeles and Hoquiam in Washington, at Jesup in Georgia and at Fernandina Beach in Florida, Rayonier Incorporated has selected Erkote Mastics to insulate and protect vital operating equipment. Under conditions where ordinary coatings fail, Erkote Mastics are providing a surface coating that resists rapid temperature changes and guards against moisture, vapors and corrosive action!



Jesup, Georgia — Typical equipment in liquor-making area insulated and protected with Erkote Mastics.

Surface protection that lasts for years

In pulp and paper mills, in refineries, in every industry where metal structures are exposed to weather or chemical action, Erkote Mastics are a reliable protective coating. They are applied in one seamless application that bonds firmly to practically any surface, and they will not peel off or chip off under the most severe climatic changes.



Fernandina Beach, Florida — External equipment insulated with Erkote 3X Mastic.

Complete responsibility for every application

We manufacture our own mastic products, and our own experienced crews apply them. When you select Erkote Mastics, you can depend on our undivided responsibility for both the quality of the products and the workmanship!

Northwest Representative

Harold Rogge — 5704 East 60th Street — Seattle 15, Wash.

Southern Representative

W. W. Henderson and Sons — P. O. Box 1085 — Pensacola, Florida

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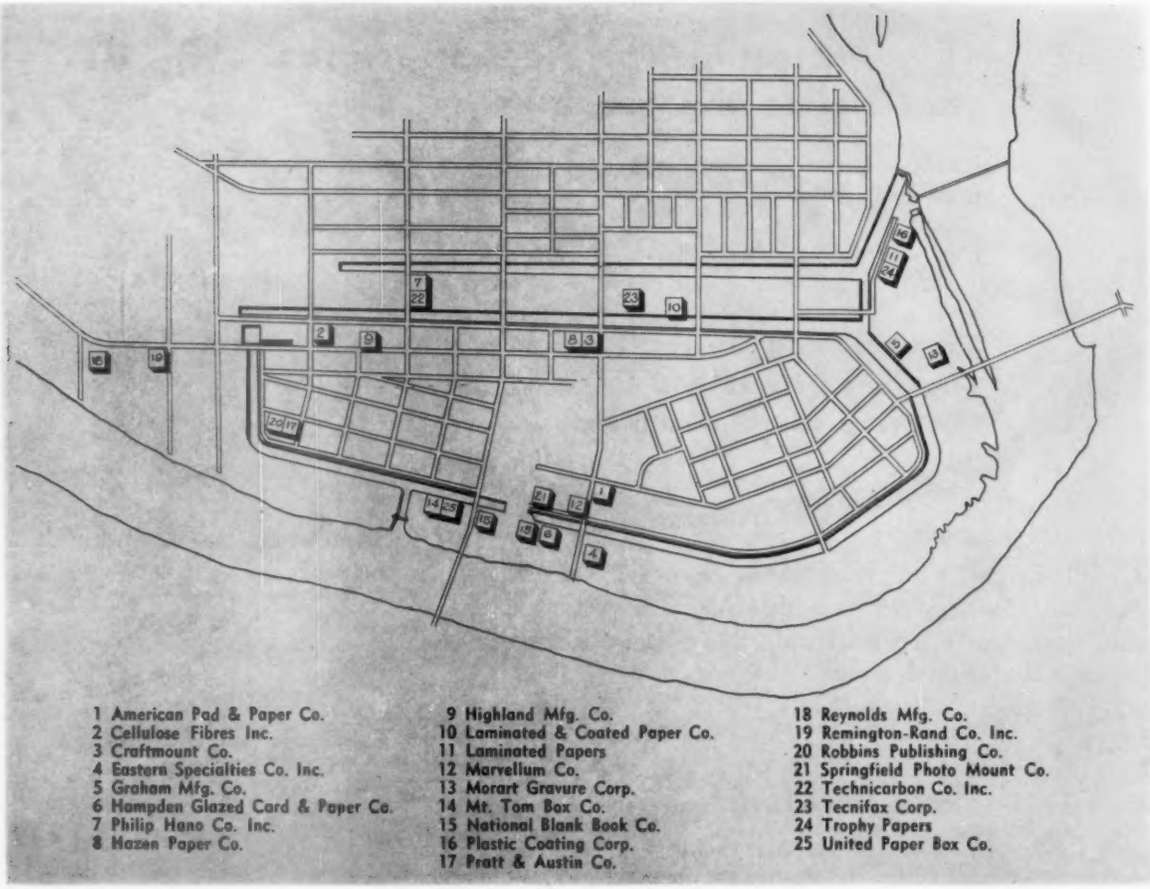

1 American Pad & Paper Co.
2 Cellulose Fibres Inc.
3 Craftmount Co.
4 Eastern Specialties Co. Inc.
5 Graham Mfg. Co.
6 Hampden Glazed Card & Paper Co.
7 Philip Hano Co. Inc.
8 Hazen Paper Co.
9 Highland Mfg. Co.
10 Laminated & Coated Paper Co.
11 Laminated Papers
12 Marvellum Co.
13 Morart Gravure Corp.
14 Mt. Tom Box Co.
15 National Blank Book Co.
16 Plastic Coating Corp.
17 Pratt & Austin Co.
18 Reynolds Mfg. Co.
19 Remington-Rand Co. Inc.
20 Robbins Publishing Co.
21 Springfield Photo Mount Co.
22 Technicarbon Co. Inc.
23 Tecnifax Corp.
24 Trophy Papers
25 United Paper Box Co.

CONVERTERS ABOUND IN HOLYOKE and this sketch spots location of some 25 paper converting plants. Compare this with air view PULP & PAPER ran last month showing paper mills.

SPECIAL PULP & PAPER REPORT

Holyoke "Incubates" New Industries

Why converters move to "Venice of America"—case histories in the city which "specializes in specialties"

● The "Venice of America"—Holyoke, Mass.—has a number of what it calls "incubator" buildings, ready for occupancy by paper converting plants or satellite paper industries.

These aren't buildings that have just been going begging. In past years they have been taken over by paper converting industries—"incubator babies." Later, as success came, these companies built new quarters of their own. At first they preferred to put their available dollars into their operations and not into brick and mortar.

National Blank Book Co., for example, was an "incubator baby." Long ago it outgrew rented quarters and moved to an entirely new location. Eastern Specialties Co., Inc., another "incubator baby," has moved twice. Stonington Paper Tube Co. is another one—a new "baby." So these "incubator" locations are continually opening up for new tenants, which is not surprising for a 107-year industrial center with a $280,000,000 payroll.

NEW MACHINES—EXPANSION UNDERWAY—One of the great Paper Cities" of the world, Holyoke now has 20 paper converting plants as well as 9 paper companies, making 550 tons a day of paper and paper products. The 5 Eagle A mills of American Writing Paper Corp. count as only one of these 9, though it is the biggest.

That 550 tons will be substantially increased and soon.

Many of the converters are good customers of the paper mills. So ex-

pansion of the paper mills is a good sign there will be room for more converting.

American Writing ordered two new Sandy Hill 90 in. "Ideal" fourdriniers., while a PULP & PAPER editor was paying a visit there! It already had recently spent $6,250,000 on improvements.

Parsons Paper rebuilt two of its Fourdriniers. Franklin Paper Co. has added a 74 in. rebuilt cylinder machine. A new 130 in. Bagley & Sewall Fourdrinier is going in Chemical Paper Mfg. Co. Crocker-McElwain has launched new expansion. And so it goes. The paper mills are showing faith in Holyoke.

For converters, the rental space in "incubator" buildings can be had for much less than the carrying charges on new buildings. Bob Barrett, Jr., president of Holyoke Water Power Co., says in many cases of new construction, the efficiency gain of the new plant may not equal extra carrying charges involved.

WHY HOLYOKE IS A "PAPER CITY"—Holyoke Water Power executives speak from long experience. Their founders, back in 1849, picked this spot on a sweeping bend of the Connecticut, where water drops 60 ft. in a mile and a half, as an ideal industrial site. They built the dam and largest canal system in America.

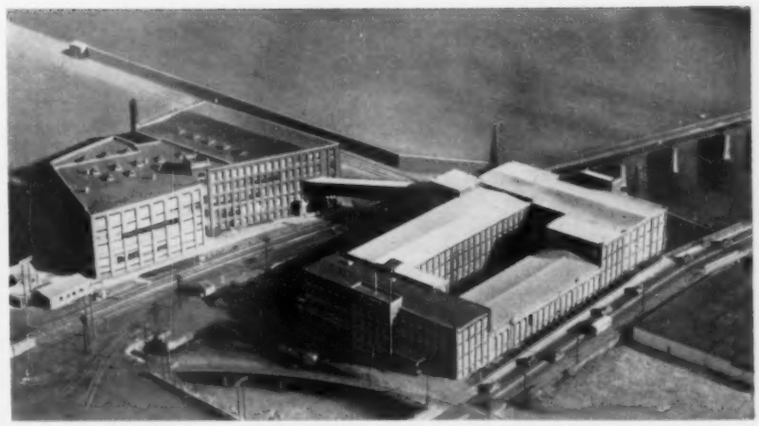
For many years Holyoke Water Power has fostered small industries, making manufacturing space available in several industrial buildings. At present, 8 of its 23 industrial tenants are paper converters. It is operating four separate mill buildings, modernized for small industries.

There are 10 reasons Holyoke is a great "Paper City," attractive to converters:

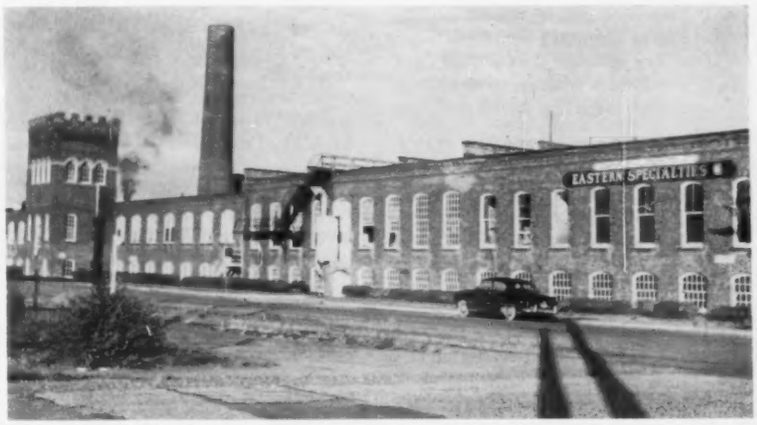
1, overnight to one-third of the U.S. population—world's richest consumer market; 2, dead center to raw materials (also near a new resource—heretofore unused hardwood forests); 3, low rentals in many existing factory buildings; 4, pool car assembly point for big eastern cities, with special rates; 5, plenty of water at low costs; 6, third lowest power rates in Bay State; 7, taxes among lowest in the state; 8, mature management-labor relations; 9, good flood protection, and 10, a trained labor market including 4th generation craftsmen with "paper in their blood."

A VETERAN IN HOLYOKE—"Holyoke makes a specialty of specialties," to quote President Ed Reid of AWP Co.

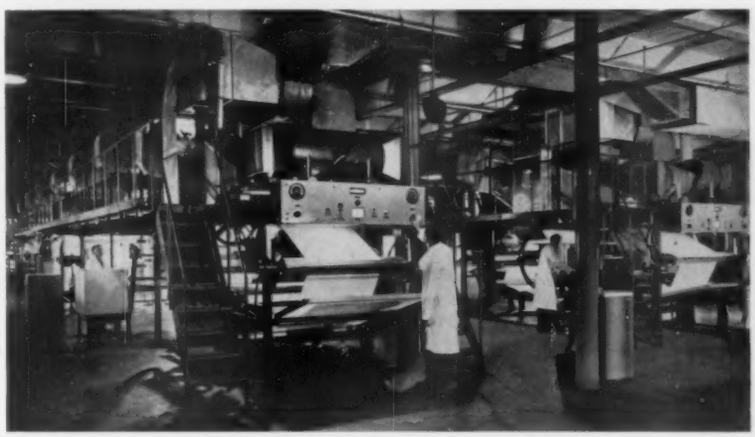
National Blank Book Co., probably most famous of the "incubator babies" is also a fine example of a specialty



ONE OF HOLYOKE'S "INCUBATOR BABIES" is National Blank Book Co. RICHARD P. TOWNE, President, told PULP & PAPER that nearness to source of high grade papers and great number of skilled workers contributed to steady growth.



ANOTHER HOLYOKE "INCUBATOR BABY," Eastern Specialties, now 35 years old, turns out hundreds of different roll specialty products and is one of largest producers of small paper roll products in the U.S.



A UNIQUE COATING OPERATION in Holyoke is at Tecnifax. This company, started by JOSEPH W. COFFMAN, President, has 250 employes and national sales coverage. Here are company designed and built 60-in. coaters. Each is 120-ft. long, capable of coating at 500 fpm of sensitized paper.

plant in Holyoke. National moved from New York City to the "Paper City" in 1881 to be near to its source of supply, the paper manufacturers. By 1898 it had far outgrown its rented quarters and moved to its present large plant.

Interviewed in his offices, President Richard P. Towne told PULP & PAPER that this nearness to the sources of supply for high grade papers in the New England and the Holyoke area, plus the great number of skilled workers in paper products available, has contributed much to the steady growth of National Blank.

EXPERTS ASSIST NEW INDUSTRIES—Because of its century of activity in industrial development, Holyoke Water Power has a staff of experts to assist new industries set up operations in Holyoke. It is also designing and constructing new modern low cost plants for expanding industries. Two such plants were built and sold to local industries in 1955.

Here are a few "for-instances" of paper companies who are now tenants in renovated industrial space.

JUST A LOCAL PHONE CALL AWAY—The Stonington Paper Tube Co., Inc. moved to Paper City from Mystic, Conn., about a year ago. This company, headed by lithe M. David Niss, makes paper cores and tubes for paper and textile industries. Mr. Niss says that every kind of service, engineering, machining as well as necessary supplies are immediately available for a phone call. Stonington is also selecting its factory personnel from the large labor pool in Holyoke and has begun to purchase a fairly large part of its raw materials, paperboard, in Holyoke.

The most important factor in moving to Holyoke from Mystic, says Mr. Niss, was to broaden his company's production and sales horizons and to increase sales in number of accounts as well as volume.

OUTGREW ITS PLANT TWICE—A well-known resident in these renovated mill buildings in Holyoke is Eastern Specialties Co., Inc., founded in 1920 by Charles E. Demaree and his brother, Paul. President Lawrence P. Desmarais recalls that it was only natural then to choose Holyoke for the establishment of a new paper converting business. The original product was adding machine rolls, tabulating machine, die wiping, teletype, mailing and addressograph rolls.

Five years after start-up, Eastern moved to larger quarters and in another 15 years to a still larger location. Today, hundreds of different roll specialty products are produced; plain, printed, ruled or carbonized. Eastern is one of the largest and finest producers of small paper roll products in the U. S.

WHAT A SPOT FOR A MILL OR INTEGRATED OPERATION! Site in center is 80-acre plot on the shore of Connecticut River with abundant hardwood forests within a 75-mile radius. Beyond this radius is Mechanicville, N.Y. mill of West Virgina P&P Co., recently converted to 100% hardwood production.

A NEW PROCESS—A UNIQUE PLANT—Probably one of the most interesting companies to visit in Holyoke is Tecnifax. Just 6¾ years ago, when the possibilities of the 1921 process invented by an Austrian monk were only beginning to be realized, Joe W. Coffman started up Tecnifax with two employes. Today, after a phenomenal growth period, the company numbers 250 employes with 15 branches, sales offices and warehouses, and 15 distributors, all placed for national sales coverage.

The need for this new process, says Mr. Coffman, grew out of the difficulties in communicating ideas, and in coordinating and integrating company activities. Tecnifax manufactures ammonia developing and moist developing Diazotype materials. In a field of 25 competitors, they are second largest manufacturers of both types.

Diazo papers are coated on two 60-in. wide, company-designed and built coaters. Each coater is 120 ft. long and capable of coating at 500 fpm, producing 10,000 sq. yards of sensitized paper an hour. Air-knife metering of the sensitizing solution is used. At the coating end are located controls for temperature, air velocity and relative humidity. A Minneapolis-Honeywell Moist-O-Graph controls sheet moisture.

Each coated roll is given a control number, and all information concerning temperature charts, humidity controls, etc., is entered upon the log-sheet of the roll. Each coated roll has its own folder, and from this springs a unique service to papermakers—a feedback system. This feedback system can supply all information concerning the paper and its performance to the paper-manufacturer who supplied the roll.

Dr. David P. Habib, technical director, says that Tecnifax supplies the paper mill with data on density readings, color on prints made from their paper, and physical charts and general performance records. The identification of each roll with its own folder is expensive, he admits, but it pays dividends in trouble-freedom and uniformity of product.

YOU WANT TO SEE A COATING OPERATION?—The visitor to coating mills is familiar with the red tape usually surrounding his seeing a rival's coating operations. But Production Manager Russell McKechnie assured PULP & PAPER that every competitor is welcome to visit these operations.

But Tecnifax's unusualness doesn't stop there. Employes are often amazed at the frankness with which President Coffman discusses company finances with them. Once a months he sits down with secret-ballot elected representatives of the plant employes and actually shows them the company's books. Mr. Coffman doesn't believe that his company's obligations stop at this point. He believes the company has obligations to supplier, customer, stockholder and employe alike, and that no segment should benefit at the expense of the other.

To produce its top quality products, says Mr. McKechnie, Tecnifax uses good equipment, and works always toward securing efficient, cooperative employes and maintaining a good communication system with customers and suppliers. The future growth of Tecni-

fax is limited only by the imagination of its people, he predicted.

The Tecnifax plant, formerly a textile mill, is a "model" example of the conversion of a typical 19th century New England factory to 20th century manufacturing methods. Much of the electricity for power, lighting, and drying ovens is generated by the Tecnifax hydro-electric plant on Holyoke's ingenious canal system.

Guiding spirit of Tecnifax is Mr. Coffman, whose leadership in the reproduction industry was recently indicated by his election as the first president of the newly-formed National Association of Diazotype and Blueprint Coaters.

THIS CONVERTER GREW FAST—A short 28 years ago, a job ruling firm, Paper Service Co., Inc., began operations with two hand-fed ruling machines and 3 employes. One was the president's wife, who was helping to process 48 reams of paper a day. Today the company has a complete printing department with 5 presses and modern ruling machines and its 50 employes process 785 reams daily.

R. Franklin Kinley, president-treasurer, says that hitting 25 tons a week of paper is a new high for his company, but by no means has it closed the door to the challenge of the future.

NEEDS MORE SPACE—C. H. Bell doesn't have to remember too hard how he helped set up an 84-in. laminating machine for the production of asphalt laminated kraft in Holyoke. It was only two years ago, he says, and as president of Laminated Papers, Inc., he adds that his product has found ready acceptance. So much so, that Laminated is now leasing additional space for its expansion program.

AN ORIGINAL NEWCOMER—Relative new to Holyoke is Trophy Papers, Inc., headed by young Bill Snyder, Jr., which performs a laminated service to paper users. Trophy's 400 fpm 76 in. wide laminating machine manufactured from its own plan, has been designed to combine various papers, boards, foils and textile reinforcing materials using wax hot melts, natural glues and synthetic resin emulsions. It laminates exclusively from rolls and is presently widening its 54-in. Cameron slitter.

Holyoke is a quality paper and converting center, says Mr. Snyder, and its labor, with paper handling "know-how," gives it higher product quality and greater customer satisfaction. Locating in Holyoke, he says, allows Trophy to offer its customers speedier fulfillment of orders through fast accumulation of supplies and the overnight delivery of finished product through excellent trucking facilities.

ANOTHER "INCUBATOR BABY"—Laminated and Coated Paper Co. is another "incubator baby" and laminates foil to paper for ice cream bags and more recently Mylar polyester film to paper and cloth.

Mylar is a transparent film with the clarity of cellophane made by Du-Pont. Its largest use at present is in electrical insulations but its many qualities have led it to be considered for liners in multi-wall bags and fiberboard drums.

NEXT MONTH—A third special PULP & PAPER report on Holyoke and how it is developing as a Paper Converting Center.

ADVICE AND HELP FOR A POSSIBLE NEW HOLYOKE PLANT. Spearheading program to tell prospective industries of advantages of Holyoke are these members of Regional Business Development Corp., a non-profit group, and the Holyoke Chamber of Commerce, headed by BERT KENT, retired Holyoke Res. Mgr. of Hercules Powder Co., Inc. (l to r) SAMUEL RESNIC, attorney; DANIEL O'CONNELL, Pres., Daniel O'Connell's Sons; GEORGE V. WALLACE, JR., Pres., Hadley Falls Trust Co.; JOHN S. BEGLEY, attorney, Pres., Regional Business Development Corp.; ABRAHAM SALTMAN, local merchant; ROBERT E. BARRETT, JR. Pres. and Treas., Holyoke Water Power Co.; BERNARD J. RILEY, Secy., Holyoke Chamber of Commerce; and in foreground with back to camera—an anonymous client.

"When more men practice good citizenship, fewer will have to die for it."—**KARL BENDETSEN,** vice president, Champion Paper & Fibre Co. and Texas Division general manager.

"No product ever is firmly established in its market. There always is the opportunity for a better product to replace it. No account is ever completely sold. A rival always has a chance to get it."—**WALTER J. CAMPBELL,** managing editor, Steel magazine.

"The future is unusually bright."—**ALEXANDER CALDER,** president and chairman, Union Bag & Paper Corp.

"Rep. Arthur Klein's proposal that advertising be limited in large newspapers so small newspapers will have an adequate supply doesn't excite much enthusiasm among 'big' publishers. Several agree there is only one answer: More newsprint mills."—**EDITOR & PUBLISHER,** summarizing comments from 10 papers with world record highest advertising incomes.

"We have every reason to expect continued prosperity in the pulp and paper industry. All our plans are based on expectations of a favorable year."—**JOHN E. ALEXANDER,** president and general manager, Nekoosa-Edwards Paper Co.

"Our staff has devoted years to studying possible use of bagasse as a source of pulp. The time for decision is shortly approaching. It may mean a new major development—paper may become an important part of Hawaii's economy."—**ALAN S. DAVIS,** president, Hawaiian Sugar Planters' Assn.

"1956 will be our greatest year with company sales 18% over 1955. The construction industry, a main prop of the economy, will set a new record. Cost of goods and service will exceed the once unheard-of $400 billion dollar mark."—**MELVIN H. BAKER,** chairman, National Gypsum Co.

"Let us raise our glasses to the young salesman. May his enthusiasm never waver. For it is your salesmanship, or that of those you hire, which is keeping America at the highest economic level in history."—**HAROLD L. ZELLERBACH,** president, Zellerbach Paper Co.

Unpopular Subject Was Popular

Fowler lays it on line in newsprint controversy. Feared threat to U.S. fine paper industry takes a back seat

• The Canadian Pulp & Paper convention is a memory now—happy, or otherwise, depends upon a member's point of view. But like all conventions, it was hectic, with many concurrent sessions and hosts of new friends to meet and old ones to greet.

To an American in the Paris of Canada, it was a sort of homecoming, like this industry's conventions are, regardless of whether they are held on one side of the border or the other. There were several significant highlights of the annual meetings of Canada's only billion-dollar industry, which employs 300,000 and adds $3,000,000 every day of new wealth to the Dominion.

"THAT WAS AN INTERESTING REPORT YOU MADE," says DR. W. BOYD CAMPBELL, Canadian Pulp & Paper Research Institute, to JOE CHAPMAN, Chemical Engineer, of Albert E. Reed & Co., Maidstone, Kent, England. Mr. Reed discussed fiber distribution in relation to machine operation.

BIG SUBJECT WAS NEWSPRINT—You might say that it was the most popular unpopular subject of the convention. Premier Maurice Duplessis' name was mentioned with a lot of headshaking.

Robert Fowler's talk on newsprint, to sum up opinion, was a gem. Mr. Fowler really laid it on the line, compared rises in newsprint costs to those of other industries. One example stands out—the cost of a full page ad in a Montreal paper jumped from $300 to $400.

In spite of Mr. Fowler's attempt to set the record straight, Quebec papers ran only small items on his speech, with no editorial comment. The New York Times gave it about a half column (see lead Letter to Editor—page 4).

To get back to M. Duplessis, some said he will drive companies out of Quebec and it is known that at least one company is disgusted with the whole matter and is considering moving into the South.

THE RELIGIOUS ISSUE—Having tangled with newsprint manufacturers in Quebec over his proposal to control their prices and operations, Premier Duplessis has now crossed swords with operators over the issue of Sabbath observance. He insists industry must operate on a six-day basis.

Before a Catholic union group, M. Duplessis attacked Douglas W. Ambridge, president of Abitibi Power & Pulp Co., who had said capital requirements of mills could be reduced 10% by 7-day operation. The premier described Mr. Ambridge as one of the newsprint men who is "dazzled by the glitter of the golden calf instead of the light of reason."

"Quebec has its own national and religious traditions which it intends to keep and no outsiders are going to tell us how to run our affairs," said M. Duplessis. (Abitibi has no mills in Quebec).

CANADA "THREAT" IN FINE PAPERS MAY BE REMOVED—To many American producers of book and fine papers, a speech made by Mr. Fowler prior to the convention—before the Gordon Economic Commission—was as important as anything that happened at the meeting.

A year or so ago, he had been making statements that some American producers feared was an indication that Canadians aspired to compete with American fine papers; that they might, in some cases, rebuild or expand to shift from newsprint to fine paper. Now he emphasizes newsprint and thinks, with government cooperation in tax matters, Canada can double its newsprint output.

BUT FOWLER ISSUES WARNING—Mr. Fowler, before the convention, reviewed that earlier comment. He did not, however, speak in the same vein. He was disgusted with the "turmoil and clamor" which has descended on newsprint mills.

He warned newspaper publishers Canada may follow the example of U. S., where more wood fiber is now used for other products than printing papers "free of government interference, political unrest and bickering" with customers. Even in Canada, market pulp capacity has increased twice as fast as newsprint in 5 years.

"It is a question whether we produce more newsprint or a more agreeable product," he said.

They almost audibly sighed with relief when he said: "The Canadian industry should not become preoccupied with the idea of producing finished goods. The country's role as a primary producer is more important. We cannot forbid by government decree the export of pulps and force other countries to take our fine paper. They can and will turn elsewhere for raw materials or find alternative materials to maintain their industrial output."

AMERICANS "PRE-CONVENTION"—On the Montreal sleeper from New York, there were enough Americans going North to have a pre-convention. H. C. Peterson, Jr., assistant general kraft sales manager, St. Regis pulp division; Bill McNair, new kraft pulp sales manager, also for St. Regis; Bert Blattmann, executive vice president of

Pagel-Horton; Ira Wallach and Ted Wilbert of Gottesman & Co.; C. M. Overton and Tim Overton of Castle & Overton; Hank Lankanau of Conkey Division of Chicago Bridge; Nick Shoumatoff, West Va. P&P engineer; Harold Holden, president of Eastern Corp.; Jim Ritchie, executive director of U.S. Pulp Producers, Inc.; Reed Porter, executive secretary of the Pulp Consumers Assn., Inc. and many others.

More than 1200 guests and members registered, setting a new record. Some came from Finland, Holland, Italy and Great Britain.

INVITES CANADIANS TO BRITAIN—An invitation has been extended by the British Technical Section to CPPA for a tour of the British industry this Fall. The itinerary starts in Scotland Sept. 24 and ends in London Oct. 12.

The Summer meeting of CPPA will be held at Murray Bay, Que.

CANADIANS IN EXPANSIVE MOOD—To date some $300,000,000 had been announced in expansion and modernization with another $256,000,000 reportedly in the works. The Canadian forest industries are using only 60% of allowable cut, according to a reliable source, though costs are rising.

Awards for the safest mills in Canada went to Quebec North Shore Paper Co. (Class A) and to Fraser Cos. Newcastle, N. B. mill (Class B).

Some Canadian mills are sitting on the fence watching chlorine dioxide. They won't go to chlorine dioxide bleaching until they have to. But one Canadian mill is going to ClO_2 bleaching for sulfite. A U. S. market pulp mill has shelved other improvement plans to rush through a chlorine dioxide plant.

A Canadian viewpoint is that ClO_2, it is o.k. for kraft, but for sulfite Canadians don't really need it unless U.S. competition forces them.

NEWS ABOUT U.S.A.—There was a report that a new continuous digester is being readied by a U.S. company. Just an indication that there is almost as much news about U.S. mills at Montreal as Canadian. That's where news of I.P.'s Mobile expansion got around last year.

Chemigroundwood was a lifesaver to Great Northern Paper Co. last summer, delegates heard. Limited power due to low water conditions didn't hinder The Northern much because of low power requirements of Chemiground. After pre-treating in those huge vertical digesters, Chemigroundwood logs take only ½ the hp requirements of regular spruce wood. Total Chemigroundwood furnish went up to 60%. There were reports in Canada that newsprint mills are making 9 pt. Maybe newspaper publishers have something there to worry about and should do less howling about price increases.

LOOKING AHEAD 25 YEARS

Will It Be Newsprint, or Something Else?

"More profitable, more peaceful?" Shall Canada's timber be used for products less "political," involving less bickering.

By ROBERT M. FOWLER
President, Canadian Pulp & Paper Association

● What did newsprint companies do to involve themselves in all this turmoil and clamor?

We did not break the law . . . do something unusual that other businessmen havn't been doing . . . We did not create misery by throwing people out of work. We did not pawn off unsatisfactory goods . . . We even did better for the usually forgotten shareholders. They've had a thin time through 15 years of depression and war, and rebuilding and expansion of mills have taken 40 to 50% of their net earnings. These include 100,000 Canadians (many also employes), thousands in the U.S. and elsewhere. . . . I may be getting onto dangerous ground, suggesting shareholders have a few rights. If you happen to be successful, doing your job well, providing goods and services people want, you better watch out . . . you should at least be decently apologetic.

COMPARES PRICE INCREASES—The newsprint price advance was 3 1/3%. It was the first in 3 1/2 years. In the same period, the price of aluminum increased 24%, nickel, 13%, copper, 77%. The Canadian non-ferrous metals index rose by 17%. These would seem fair comparisons because they involve natural resources belonging to the Canadian people and sold both in Canada and extensively in foreign markets.

NEWSPAPERS DOING WELL—I am glad to say, that Canadian newspaper publishers have apparently been doing well; at least they have had a lot more to work with. According to the Dominion Bureau of Statistics, the total take of Canadian daily newspapers in advertising increased from $32.6 million in 1944 to $118 million in 1954. As the demand for advertising rose, rates went up. In the 3 1/2 yr. period, 77 Canadian daily newspapers increased their advertising rates; another 14 for which we have records apparently made no change. Of the 77, 25 changed basis of quotations and therefore I cannot give you the amount of increase. For the other 52 newspapers, the average rate increase in the 3 1/2 year period, was 13.3%. A full-page advertisement in

AMERICANS AND CANADIANS GET TOGETHER in this CPPA Convention close-up. (l to r) R. J. (MARTY) MARTIN, Assistant Mill Manager, Fraser Paper, Ltd., DICK TALBOTT, R. T. Vanderbilt Co.; FRED SOMERVILLE, Plant Chemist, Armstrong Cork, Fulton, N.Y.; RAY HARTER, R. T. Vanderbilt; DON SEELY (sitting), Assistant Pulp Sales Mgr., Fraser Cos.; FRED RICHARDS, General Auditor, Fraser; DOUG MORRISON, Toronto Board Sales for Fraser (sitting); PAT PATTERSON, Swift Canadian Co. and ALEC MATHESON, Fraser Traffic Mgr.

PUSHING BACK THE SEA *makes room for new $11,000,000 chlorine-caustic soda plant. About 1,000,000 yards of the sea bottom will level the 100-acre plant site, protecting it from tides and providing a deep-sea dock.*

Vancouver, early 1957:

Western Canada's first domestic source of chlorine and caustic soda

In little more than a year, pulp and paper mills of Western Canada will feel the advantages of a new source of caustic soda and chlorine . . . their first domestic source.

If your company has a mill or plans to build one on the Western Canadian seaboard, here is what this means to you:

You will be able to get faster, cheaper delivery of caustic and chlorine over a shorter supply line. There will be a small but real freight saving. And you will be able to draw more timely, more flexible technical assistance from men who know your industry well.

These and other advantages will be yours thanks to a new $11,000,000 Hooker plant now under construction at North Vancouver.

The new plant will be part of a distinctly Canadian company, Hooker Chemicals, Ltd. It is being built by Canadians to serve Canadian industry. It will use the manufacturing processes and experience of Hooker Electrochemical Company, well known to the pulp and paper industry for fifty years.

If you would like to discuss the new plant and your own needs, or if you would like technical data and assistance on Hooker chlorine and caustic soda, write to Hooker Chemicals, Ltd., 717 Pender St. West, Vancouver 2, B. C.

NOTE: *During the construction period at Vancouver, the Hooker plant at Tacoma will continue barge and tank car delivery of chlorine and caustic soda to your area. Another dependable supply of caustic is provided by our storage depot at Vancouver.*

From the Salt of the Earth

HOOKER ELECTROCHEMICAL COMPANY

2 UNION STREET, NIAGARA FALLS, N. Y.

NIAGARA FALLS • TACOMA • MONTAGUE, MICH. • NEW YORK • CHICAGO • LOS ANGELES

HOOKER® CHEMICALS

5-2300

the Montreal Gazette's annual year-end issue rose, in the past year, from $300 to $400, 33 1/3%.

I think that price increase was probably justified. I vigorously defend the right of the Montreal Gazette to try out the market. The price went up for only one reason; because the demand increased. That is our system of economics and it is a good system.

NEWSPRINT DEMAND – During 1955, the demand for newsprint spurted ahead. In the United States, our largest market, publishers consumed almost 8% more newsprint than in 1954 and they would have used more if they could have bought it. Overseas the demand increased nearly 10%.

In Canada, newsprint capacity has been increased by 1,600,000 tons in ten years. In the next three years, Canadian newsprint capacity will thus increase by more than 800,000 tons. Similarly, in the United States a total of 600,000 tons will be added in the same period.

At the 1955 price of newsprint, if you happened to have $60 million lying idle, you could build a newsprint mill which would, in time, produce nearly 200,000 tons a year. If you operated it at full capacity, you would earn, after taxes, etc., 4.2% on your investment. If operating levels dropped this modest rate of earnings would soon fade away. I leave it to you, whether that was an attractive place to put your $60 million.

DISCREDITABLE AND IRRITATING—It would be easier to treat the events of 1955 as a rather discreditable and irritating occurrence and hope they will be soon forgotten. But I believe that they cannot be forgotten and that an industry has some obligation to state the facts for future guidance of its customers.

Taking the markets of the world for Canadian newsprint, and putting them together, we end up with an estimate for 1980 of a 12.5 million tons newsprint demand on Canada. That compares with a 6.2 million ton production in 1955, a possible doubling of the output in 25 years. This is the minimum potential.

Whether we attain this spectacular growth or not remains to be seen. It will only be done at heavy cost—increased expenditures on research, forest conservation, silviculture, transportation facilities to open up forest areas, utilization of other wood species, training of men to run a greatly enlarged industrial machine, etc.

But there is something more urgently needed. We will not achieve our opportunities unless we can find some way to put an end to the senseless bickering and controversy between newsprint producers and customers and between producers and governments that have marred the picture of 1955. It is doing us no good here in Canada and doing us positive harm with investors and customers and governments in other countries. And, if continued, it will do us even more harm in the future.

WILL IT BE NEWSPRINT OR SOMETHING ELSE—Newsprint, all over the world, is facing tough competition for wood fiber resources. Already in the United States, twice as much wood fiber is used for other products—packaging, building materials, textiles, and so on—than for printing papers. These other products seem able to achieve some reasonable identity of interest and purpose between sellers and buyers. They are almost totally free of governmental interference and political unrest. Generally speaking, they are as profitable and certainly more peaceful. You need only look at the statistics. In the last five years, Canadian market pulp capacity has risen by 30%, while newsprint capacity increased by 17%. The question here is not whether we produce more newsprint or do not; it is a question whether we produce more newsprint or some other equally profitable and more agreeable product.

NEW CPPA HEAD. A. C. (COOSY) PRICE, President, Price Brothers & Co., Ltd., and of Price Bros. Sales Corp., is new Chairman of the CPPA Executive Board.

A. C. (Coosy) Price Is "Mum" on His Nickname

A. C. (Coosy) Price, president, Price Brothers & Co., Ltd. and of Price Bros. Sales Corp., is new chairman of the CPPA executive board.

Origin of the nickname is unknown and Mr. Price promises it shall always remain so.

Quebec City-born Mr. Price has spent his entire career in the industry and with Price Brothers. He joined the company in 1921 after graduation from Royal Military College and worked in the company's woodlands, pulp, paper and lumber operations throughout Quebec.

New Information from Technical Sessions

● The Technical Section meetings were really technical!

But there was a packed audience for hydrodynamics. A Kimberly Clark man explained those streaks on machines. High speed movies were acclaimed as a new seventh sense for papermakers. Two-way radio control of industrial trucks was a high spot. So was a lively debate on calendering.

But one respected chief chemist of a paper company walked out on a session on sizing—said it "was too technical for me."

Here are same highlights that seemed important:

Undisputed highlights were the hydrodynamic sessions. Now we're really getting into "the meat" of papermaking, Nick Shoumatoff remarked. Others agreed.

These hydrodynamic sessions on the Fourdrinier wet end, chairmanned by Dr. R. Dorland of Abitibi in the morning and by Wes Bennett of Canadian IP in the afternoon, drew capacity audiences. Harold Holden, president of Eastern Corp., was one of those whose interest kept him throughout the sessions.

Hydrodynamics, according to Webster, is the science of laws of motion and action of liquids; the principles of dynamics as applied to water and other fluids.

What these fellows have been studying is the movement of fibers on the Fourdrinier and the influence of fluids, in which these fibers are suspended, upon formation of the sheet.

Some of the technicians have taken this quite seriously and have produced, among other things, some remarkable motion pictures. One film shown was taken at 7,000 frames (or pictures) a second. Compare that to the home movie-maker whose camera operates at around 32 frames a second.

STREAKS ON MACHINES—An outstanding paper was by C. A. Lee, of Kimberly-Clark Corp., on the subject of streaks on paper machines as related to a stable spiral flow in the inlet. He showed not only research but how it applied to the paper machine and explained the very common trouble of streaks. Vortices in the

headbox were the cause and by controlling these you can make a useful condition instead of a bad one.

NEW INFO ON DRAINAGE—A co-authored paper by Dr. George Burkhard and P. E. Wrist, Quebec North Shore Paper Co., supplied new information on the drainage problem. Drs. A. A. Robertson and S. G. Mason have done some outstanding work on flocculation.

The movies help give some insight into details of fiber behavior on the Fourdrinier but they have to be tied in somehow with papermaking itself.

One fellow said that the movies provide a seventh sense for the papermaker. One film taken at 7,000 frames p/sec. while the paper machine was running at 1600 fpm with .06% consistency in the headbox, showed spouts of stock 4-in. high.

In a talk on gas in papermaking stock, J. D. Boadway, Consolidated Paper Corp., Ltd., said gas was not from stock but came when it hit the wire.

LIVELY SESSION ON CALENDERING—This was introduced with a paper by Bill Wendell of Fraser. Incidentally, Bill leaves March 1 to join Draper Felts. Following his talk, there was some of the open discussions, typical of these Canadian meetings.

One mill man said that "people may call us crazy" but that his mill ran a rubber roll on top of the stack and it runs well. A soft roll is better, he advised, adding that they used it for the extra weight and estimate the life is about 2 years.

"Do you have excessive end thrust when using anti-friction bearings?" asked one superintendent. "We have one stack with spherical roll bearings and no trouble to date," was the answer.

There was considerable discussion on "offsetting" the stack. One engineer asked if offsetting was for chattering, and if so, what takes place to offset chattering? The answer was that offsetting bears down on the bearing and also on the roll; gives stability and the rolls don't swing so easily.

One mill doesn't put steam in rolls for first 8 hours.

One mill put in Bauer Cleaners and barring disappeared and life of rolls was much longer.

There was much controversy on open frame vs. A-frame. Some claimed it takes longer to change the stack with the new frame. Air pipes and calender cooling systems are not situated well in this regard.

One mill has its doctors hanging on the stack; have changed the stack and say they are better off. Another mill has taken its doctors off and uses air instead.

Some Southern U.S. mills, it was said, mount the doctors on the calender in case of jumping. Some mills running with air instead of doctors are reported to be running very well.

One equipment rep (name supplied on request) reported that if air pressure hoses are arranged properly there should be no trouble. Some Southern mills, he emphasized, are doing this.

COOPERATIVE COMPANIES — LIFT TRUCKS—At the materials handling session, chairmanned by E. Mason of Canada Paper Co., Don Hall, of The E. B. Eddy Co., revealed the experience of his company in two-way radio control of industrial trucks.

The Eddy Co. rents five units and a dispatcher unit from Bell Telephone Co. for a nominal charge including service. Renting eliminates the factor of obsolescence. They have these units on their road trucks and on one locomotive operated by the company.

Cost of owning such a system outright is around $3,000 and that of rental is about $205. However, because of service arrangements with rented equipment, some believed rental is more economical.

The E. B. Eddy Co. has not installed these units on its fork-lift trucks as yet. One equipment company has these units on three lift trucks and report that outage time is negligible.

Another company put heavy foam rubber on its diesel to absorb diesel

Awards and Officers

Dr. Raimbault de Montigny, technical director, The E. B. Eddy Co., Hull, Que., was elected chairman of the technical section for 1956. He has a doctorate from McGill U. in chemistry and also took a post grad course in chemical engineering at the Imperial College of Science and Technology, London, England. He succeeds J. W. Wing, vice president, Gaspesia Sulphite Co.

Two new councillors are Dr. R. D. Duncan, Canadian IP, La Tuque, Que., and Guy Minard, vice pres., Spruce Falls Power & Paper Co.

G. E. Backer, mechanical supt., Consolidated Paper Corp., was honored for his work as chairman of the mechanical engineering committee with the F. G. Robinson Technical Section Service Award. He received the Bronze Medal and a citation from Arthur A. Schmon, the 1955 chairman of the CPPA.

The I. H. Weldon Gold Medal for best paper at the previous annual meeting was awarded to Dr. K. C. Logan, Gunnar Gavelin and Jasper Mardon, all of Northeastern Paper Products, Ltd. E. H. Snider, Canadian IP, won the C. Howard Smith Gold Medal for the best paper in 1956 by a junior or student member. Its subject: drying qualities of machine felts.

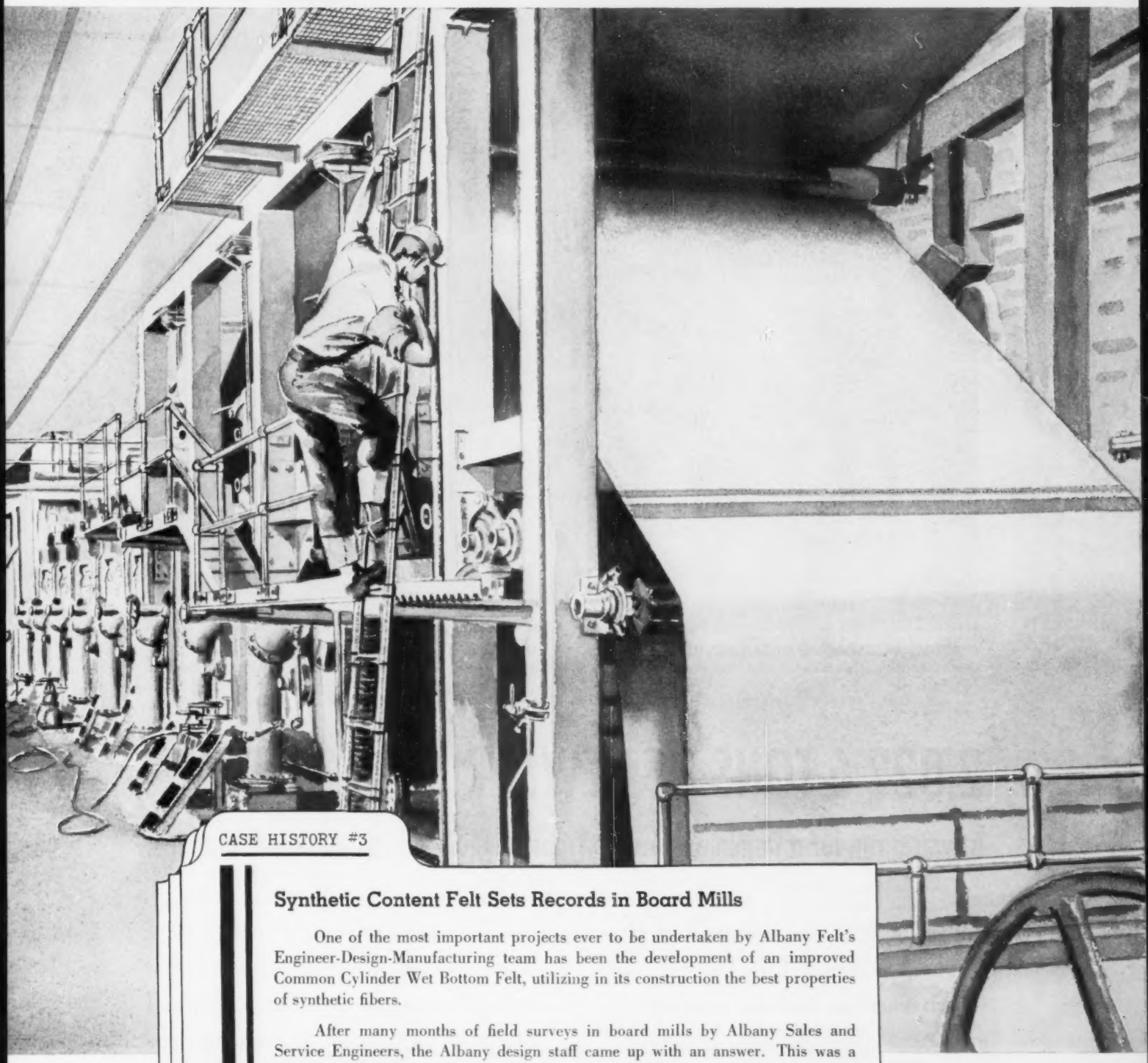
For a process of gluing newsprint wrapper, H. C. Graham, Elk Falls Co., Campbell River, B.C. won first prize in the gadget competition. A. Booth of Canada Paper Co., Windsor Mills, took second prize for his improved paper winding mechanism.

Dr. Otto Maass was awarded the CPPA Special Service Award Medal for service to the industry.

"IT SURE IS A BEAUTY" says VERN EMORY (l), Mgr. of Mfg., Pulp and Paperboard, Fraser Cos. Ltd., as he examines trophy for safest mill in Canada (Class B) awarded to Fraser's Newcastle, N.B. mill. Clutching award and beaming is RALPH MURCHIE, Newcastle Mill Supt.

NEW TECHNICAL SECTION CHAIRMAN, CPPA, for 1956 is DR. RAIMBAULT DE MONTIGNY, Technical Director, The E. B. Eddy Co., Hull, Que.

"WHAT'S NEW" is discussed by this quartet. Standing (l to r) are DONALD HELLEUR, Groveton Paper Co.; THAXTER W. SMALL, Sprout, Waldron & Co. Sitting are BILL CONVERSE, also of S-W and LARRY R. BEATH, Price Bros.



CASE HISTORY #3

Synthetic Content Felt Sets Records in Board Mills

One of the most important projects ever to be undertaken by Albany Felt's Engineer-Design-Manufacturing team has been the development of an improved Common Cylinder Wet Bottom Felt, utilizing in its construction the best properties of synthetic fibers.

After many months of field surveys in board mills by Albany Sales and Service Engineers, the Albany design staff came up with an answer. This was a felt of wool-synthetic construction, with synthetic content amounting to less than 25% of the total, this having been found to be the most desirable ratio.

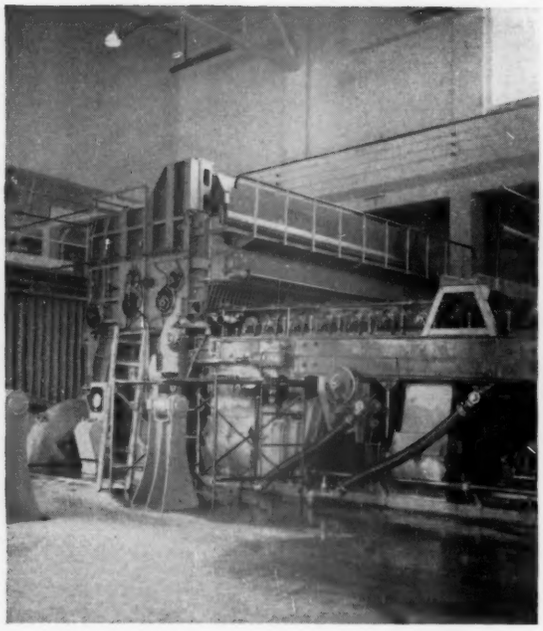
RESULTS: The first run of this new felt on test liner at 450-500 feet per miuute resulted in *twice the life* of felts used previously. In addition, it showed excellent dimensional stability, and gave superior drainage and finish. Subsequent test runs in various mills have shown equally impressive results, increasing felt life while retaining all other desirable characteristics.

For improved felt performance on your machines, call in your Albany Felt Sales Engineer. His analysis of your problems, together with the efforts of the industry's top team of Service Engineers, Designers, Research and Laboratory Specialists, will bring you the famous "blue line" felts you need to help produce *more saleable tons per day!*

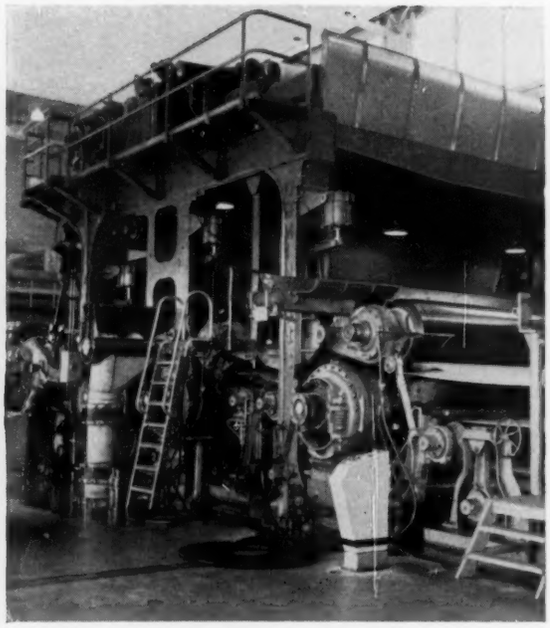
ALBANY FELT COMPANY

"THE WORLD'S LARGEST MANUFACTURER OF PAPER MACHINE FELTS"

Main Office & Plant, Albany, N.Y. Other plants: Hoosick Falls, N.Y., N. Monmouth, Me., St. Stephen, S. C., Cowansville, P.Q.



DOMINION PRESSURE TYPE HEAD BOX feeds the stock efficiently ensuring good formation on the wire at any operating speed.



DOMINION COUCH VACUUM TRANSFER, another design feature contributing to the overall operating efficiency and output.

2,022.6 TONS OF NEWSPRINT IN 6⅔ DAYS!

A typical run for a Dominion Vacuum Transfer equipped 284" newsprint machine.

This machine is equipped with a Dominion Pressure Type Head Box and Couch Vacuum Transfer incorporating a Screw Type Broke Conveyor-Pulper. The latter not only removes broke from the Press section but also reduces it to pulp and returns it automatically to the Couch Pit. 2,022.6 Tons of Commercial Newsprint produced in 6⅔ days is an enviable performance but one that will be surpassed as this machine and others of its type are brought to their design speeds. This is achieved through close liaison between the paper makers of Canadian Mills and the Engineers and Designers at Dominion Engineering.

DOMINION ENGINEERING
COMPANY LIMITED
PAPER DIVISION
MONTREAL TORONTO WINNIPEG VANCOUVER

shocks. As to the effect of change of temperature on these mobile radio units, one company operates them in temperatures ranging from 60° to zero, and reported trucks do not appear affected.

PROPANE GAS—Use of propane gas (LP) as a fuel for industrial trucks is comparatively new to the Canadian industry, and has been viewed with doubt and suspicion. One result is that it is now in the hands of those who can use it.

LP gas is propane or butane and comes from wells of dry gas. For Canada, only propane is practical. Some claim it can increase the life of motors 100%.

Drivers express complete satisfaction with LP. It doesn't raise any noxious gases. LP is good to the last drop. In one mill, maintenance mechanics, when shown results on one truck, wanted it right away for all.

Another mill reports changing oil after 1,000 hours, expects it will be after 1,500 hours next time and eventually 3,000 hours. With LP there is no spoilage; minimizing fire hazard.

Saving on fuel reduction, overhauling on labor and materials and on operating expenses are expected to account for a definite increase in the use of "bottled gas" in Canada.

"ONENESS" OF U.S. AND CANADA—The awareness of "oneness" of the pulp and paper industry in Canada and U.S. was expressed by Sydney Ferguson, chairman of Mead Corp., at the Annual Luncheon. "In our thinking, we think of North America as being one country," he said. "There are individual problems but we think of it as a damestic industry." Mr. Ferguson expressed the good wishes of the APPA in what he called his "last farewell appearance."

Canadian Gains

PULP EXPORTS from Canada reached an all-time peak in 1955, totalling 2,368,852 tons, compared with 2,173,160 tons in 1954. Exports of bleached sulfite pulp rose from 330,000 tons to 463,000, which accounted for the advance.

PULP—ALL GRADES—Production of all grades of pulp was 9,967,817 tons, compared with 9,519,155 tons in 1954.

CHEMICAL WOODPULP production in 1955 topped all previous record for second straight year. Bettered 1954 by 8% and 1951 by 15%, with a total of 4,438,252 tons in 1955. Shipments to the U.S. rose 12%.

PAPERBOARD reached an all-time high of 788,236 tons exceeding 1954 and 1953 by more than 6% and previous peak output 1951 by 3.5%. Domestic shipments were at record levels, too.

GROUNDWOOD PULP gained 2.5% to top previous peak year, 1954 with 5,429,162 tons.

NEWSPRINT—A record 6,200,000 tons compared with 5,984,000 in 1954.

WRAPPING PAPER broke records with 258,000 tons, a 5.0% increase.

BOOK AND WRITING—A second straight record year.

SPECIALTIES, although not exceeding 1953, showed a marked improvement over 1954. New white wrapping grades were well received for food packaging.

MacDougall Succeeds Thom

EDWARD J. THOM (left), Mgr. of Pulp Sales, Howard Smith Paper Mills Ltd. and associated companies since 1927, retires on March 9 after 36 years with the organization. PETER L. MacDOUGALL (right), takes over as Mgr. He has been Sales Rep. with Pulp Sales Dept. and with the company 20 years. Mr. Thom has travelled extensively in the United States. He and Mrs. Thom will continue to reside at 5400 Queen Mary Road, Montreal 29, Que.

Duplessis Seeks Revenge by Law

Premier Maurice Duplessis continued his guerrilla warfare with Quebec producers who make over half of Canada's newsprint, by introducing a bill in the legislature providing for new controls. He also sought revenge against the defiant Anglo-Canadian Pulp & Paper Mills by framing a separate bill to increase its city and school taxes by $108,000—nearly 50 cents a ton on the company's newsprint production. About 80% goes to the U. S.

Duplessis is fighting against the increase in newsprint prices to Quebec papers only. Under the control bill, 4 Duplessis appointees would regulate production, sale and distribution of newsprint in Quebec and fix prices at the Sept. 1955, level. Maximum fines would be $25,000 for first offense, $100,000 for repetition. The measures, if passed, will be challenged as unconstitutional.

Ships Blo-Hog to Finland

Jacksonville Blow Pipe Co., Jacksonville, Fla., which in recent years has supplied its Montgomery Blo-Hog to a dozen or so mills in U.S.A. and Canada, including 7 big mills in the South, has shipped one to United Paper Co., Kaipola Jamsa, Finland. The hog, designed in the early 1940's is used on all species of hard and soft woods, veneer and lumber wastes, etc. W. T. S. Montgomery Jr. is president of the company.

New Company in Pulp Sales

Canadian Wood Pulp Corp. is off to a good start with two widely known veterans as representatives of the new firm. E. E. (Eddie) Barrett, president of company, in New York, and Ken O. Fosse, as representative out of Chicago, are key men in the enterprise, which is service agent for Great Lakes Paper Co.'s unbleached sulfite.

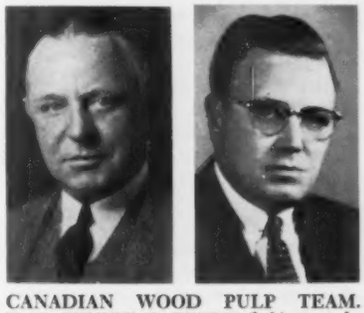
A reorganization of Great Lakes sales, splitting pulp off from newsprint, was the reason for the new company. With Canadian market woodpulp production increasing much more rapidly percentage-wise than newsprint, the company is well-named to extend its line from across the border, if occasion arises.

Eddie Barrett was born in Cincinnati and entered pulp marketing with Mead Sales in Dayton, O., in 1920. In 1926 he went to Montreal for Mead-Patton and other Canadian companies, and in 1930 to New York to be vice president and director of the former Mead Sales Co. He went abroad for several years for Mead and had been with the company 17 years when he accepted an offer to be president of the Finnish Pulp Sales Co.

The war suddenly cut off Finnish imports. He then went with G. F. Steele Co. as vice president and handled Price Bros. newsprint pulps until recent years. A separate arrangement as vice president of Powell River Sales Corp., expired in 1955, which started a new sales program.

Mr. and Mrs. Barrett live in New Rochelle, N.Y., and have 5 children, one being William M. Barrett, now vice president of Mead Pulp Sales Co.

Ken Fosse started in the industry about 24 years ago at Shelton, Wash., where he worked for 7 years for Rayonier Inc. He went to Northwest Paper Co. for nearly a year and then moved on to Chicago, where he entered pulp sales with Acer & Co. He and Mrs. Fosse live in Glencoe, Ill.



CANADIAN WOOD PULP TEAM. E. E. (EDDIE) BARRETT (left), in pulp sales for 35 years, is Pres. of new Canadian Wood Pulp Corp., with headquarters at 444 Madison Ave., N.Y., and KEN O. FOSSE (right), in same business for over 15 years in Midwest, is Midwest Rep, headquartering at 919 N. Michigan Ave., Chicago.

Urges Changes in Forest Service Review

Impartial review by forestry professor shows unjustified assumptions in Timber Resource Review; Forest Industries Council urges changes

● America's future timber supply—how does it appear after it has been studied for two months by an independent forest economist? The answer in one sentence—there is cause for optimism. U. S. timber growth, inventory of standing timber and use of forest products can all be increased simultaneously in coming decades, was the prediction.

This is essentially what Dr. John A. Zivnuska has to say in a 150-page report on the U. S. Forest Service's Timber Resource Review, which was given a complete going-over by Edward Gayner III, president of Brunswick Pulp & Paper Co., at the Open Industry Meeting of the American Paper & Pulp Assn., and to which the American Pulpwood Assn. devoted a full-morning session during PAPER WEEK.

Dr. Zivnuska, associate professor of forestry at the U. of California, was retained by the Forest Industries Council to prepare an impartial professional appraisal of TRR. Comments and suggested revisions were invited by the USFS during a review period, Oct., 1955 to March, 1956. FIC is coordinating committee of American Paper & Pulp Assn., American Pulpwood Assn., and National Lumber Mfrs. Assn., with offices at Room 1712, 220 E. 42 St., N.Y.C.

Dr. Zivnuska stresses that TRR shows the current situation in the U.S. to be substantially better than anticipated in earlier Forest Service studies. There is no room for complacency, he reports, but there is evidence that forestry efforts are yielding results and opportunity for progress.

Based on his appraisal and other information, the Forest Industries Council urges some proposed changes in the final draft of the TRR should include:

MORE CARE IN DRAWING CONCLUSIONS—Because the "facts" about the forests of the U.S. range from complete enumeration to conjecture, greater care must be taken in presenting and interpreting them and especially in drawing conclusions.

The "productivity index" for recently cut lands is obscure and hard to interpret, says FIC; it should be replaced by discussion of the separate elements composing it.

"Growth impact" and "growth loss" are both new forestry concepts. Their professional acceptance will require more complete explanation and evaluation than is given in the TRR, the FIC declares.

"ADJUSTED" ESTIMATES ARE NOT EVIDENCE OF TRENDS—The "adjusted" estimates should not be used as evidence of trends in inventory or growth, FIC says. If "adjusted" values for past estimates of timber inventory and growth are shown in the revised edition of TRR, the basis of adjustment should be explained more fully.

In projections of the future forest situation, greater stress should be placed on the carefully detailed estimates for 1975 timber requirements—not highly uncertain projections to A.D. 2000.

Projections of timber cut corresponding to the detailed estimates of forest products consumption would show a surplus of timber growth over cut for both 1975 and 2000. This conclusion was omitted from the Preliminary Review Draft of the TRR. It should be shown in the revised edition, says the industry committee.

The second "upper" projection of requirements should be dropped from the revised TRR; the FIC contends this projection has no economic usefulness, and it is demonstrated within the TRR that it would be "impossible to hold" the assumptions on which the projection is based.

Copies of Dr. Zivnuska's 150-page report are being made available by the Council to the U.S. Forest Service, State Forestry departments, schools of forestry, industry advisory committees and the press. It will be available at nominal cost to others who wish to study it.

In addition, a short summary has been released entitled "Our Future Timber Supply."

PAPER WEEK Delegates Concerned Over Proposed New Pollution Law

● Considerable interest and concern was shown during the recent PAPER WEEK sessions in New York in a U.S. Senate bill which would amend and extend the Water Pollution Control Act.

The industry has filed statements with the Senate and House public works committees, and prepared testimony for hearings of the House committee.

Big investments and work of the industry, over many years to combat the problem, rank it high among all American industries in efforts to alleviate the situation. Unfortunately, there are many popular misconceptions which find mill wastes categorized in the public mind as health hazards comparable to municipal sewage. None of the industry's present waste water constitutes any menace to public health.

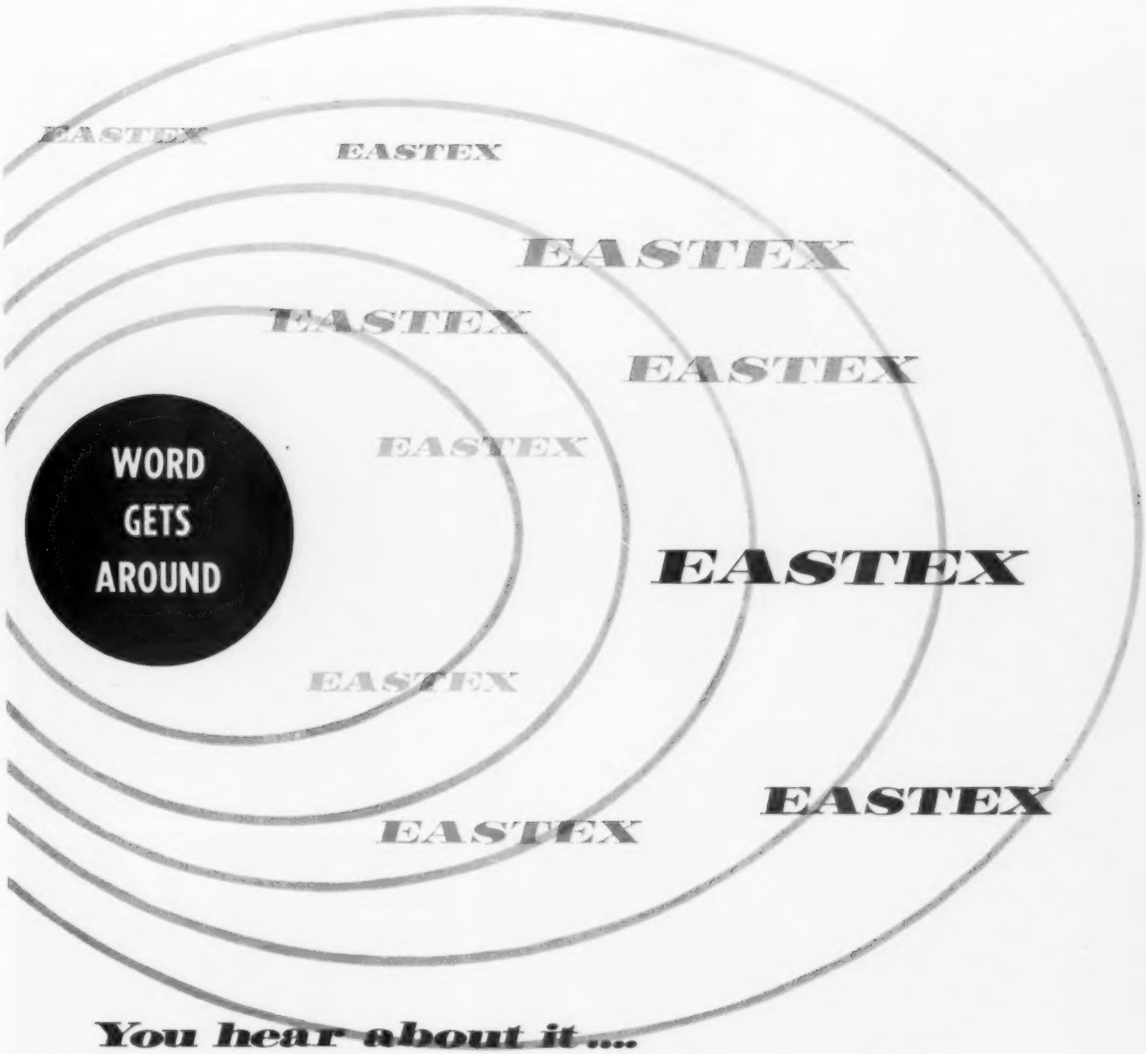
The U.S. industry has taken a position that the problem of stream pollution abatement should continue to be handled on the local level, jointly by state and interstate bodies, and the role of the federal government should be limited to study, investigation and research.

Senate bill 890 contains proposals to expand further federal enforcement authority in pollution abatement. One section of the bill would expand the authority contained in the present law, needlessly and improperly, from the viewpoint of this industry.

In reviewing the history of the existing statute, P.L. 845, no instance has been cited by government officials calling for further expansion of federal powers.

At PAPER WEEK, industry leaders told PULP & PAPER that Eisenhower Administration officials "don't believe they need such additional powers, nor can they presently visualize utilizing them if they are granted by Congress." Therefore, industry leaders said enforcement measures under the present law "should not be enlarged."

It was announced that the House public works committee will hold additional hearings on this legislation, Mar. 12-14, and it is probable that the paper and pulp industry will have a witness present to state its views.



You hear about it....

when a product, or group of products, meets and surpasses the highest standards of your trade.

Eastex pulp, board and paper have gained industry-wide acceptance . . . in record time. In the beginning, this young mill set its standards high to serve an industry which puts a premium on quality.

It's no wonder acceptance has been so universal. Eastex management and supervisory personnel were drawn from the nation's most experienced pulp and paper specialists. This leadership—coupled with the latest, most modern production facilities—has enabled East Texas Pulp & Paper Company to gain an enviable reputation with a superior product . . . second to none.

When quality is important, turn to:

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GENERAL SALES OFFICE
P. O. Box 816, Silsbee, Texas
Telephone Evergreen 5-3711

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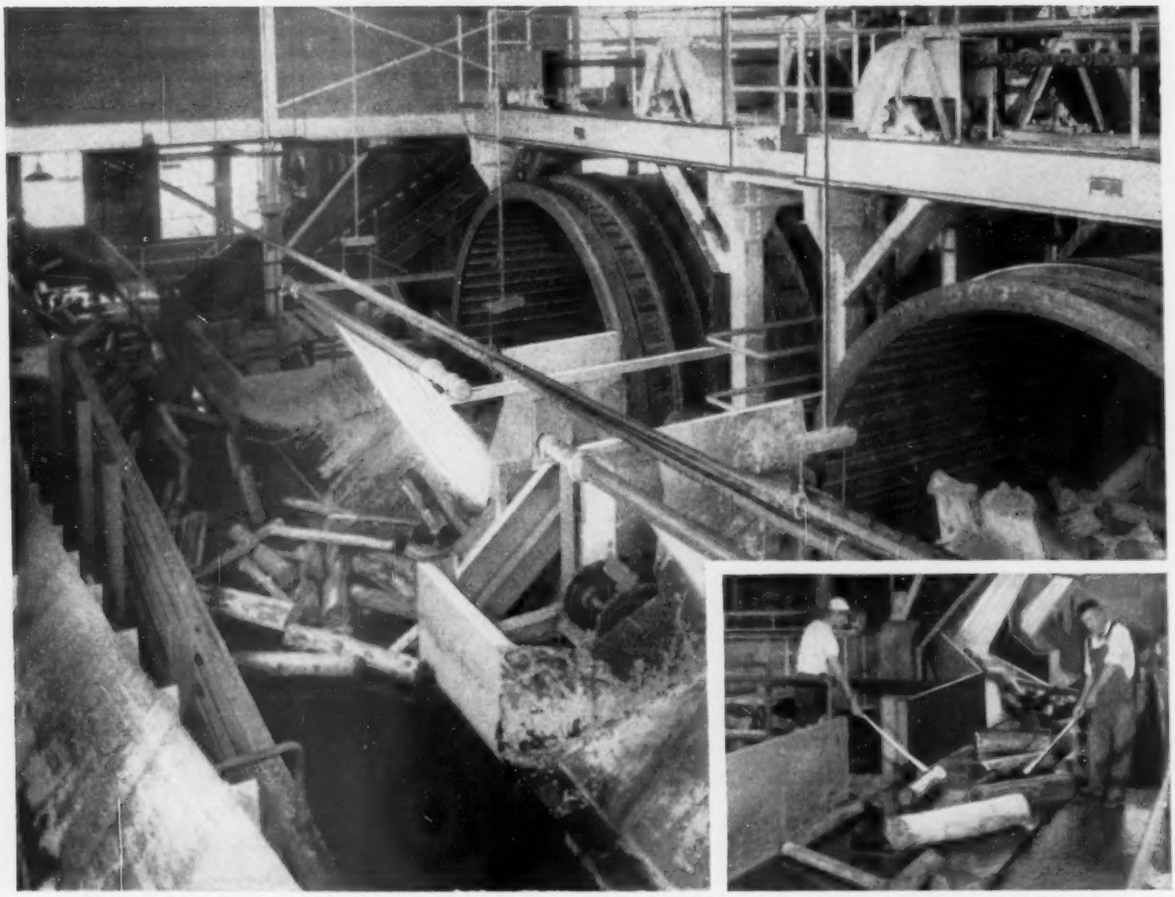
US RUBBER Conveyor Belts

Logging a new record!



This U. S. Giant® 60" wide Log Sorting Belt is built to withstand the heavy impact of logs tumbling onto it from the debarking drums (left) and to resist the sharp points of the pickaroons which the men use to sort out rejects (right).

When the Mosinee Paper Mill Company, Mosinee, Wisconsin, required a conveyor system to step up production of wood and pulp, they turned to the company that had helped with the same problem on many installations in the United States and Canada—U. S. Rubber.

"U. S." engineers studied the requirements, the mill layout, and—above all, the problem of costs. Eight "U. S." conveyor belts were installed, made endless on the job. Production went up to a new record for the log-sorting operation of Mosinee Mills.

The easiest and most economical way to increase haulage and to lower costs is to get in touch with factory-trained United States Rubber conveyor belt engineers. Their wide and varied experience in materials handling for the wood products industry allows them to give you the very best help obtainable.

Write or phone any of the 27 convenient "U. S." District Sales Offices or contact United States Rubber, Mechanical Goods Division, Rockefeller Center, New York 20, New York.

US RUBBER Mechanical Goods Division

United States Rubber

AFTER THE TOUR WAS OVER—HOWARD HINMAN, right, Mgr. of IP's Georgetown mill, discusses some of the mill's finer points with other leading Southern papermen. Others, l to r: W. M. EBERSOLE, Mgr. of Prod., Georgia Kraft, Macon, Ga.; NORBERT L. COCHRAN, Plant Mgr., Container Corp. of America, Fernandina Beach, Fla., and TOM COLDEWEY, Vice President of St. Joe Paper Co., Pt. St. Joe, Fla.

Wood Savings, New Concepts, Georgetown Visit Lure 250 to Southeast Session

● A mill tour through International Paper's biggest mill at Georgetown, S.C., and four outstanding papers attracted one of the largest southeastern TAPPI turnouts in many months to Charleston, S.C., last month.

More than 250 showed up for the night meeting and some 200 took the conducted Georgetown tour the following morning. I.P. officials, headed by Manager Howard Hinman, hosted the group for a barbecue luncheon.

The papers, described by one mill manager as "the best we've ever had," included an outline of the development of automatic digester controls at Pensacola by R. G. Cohn, assistant pulp mill superintendent for St. Regis; discussion of some of the new ideas used at Rome Kraft by George Reynolds, plant engineer (see PULP & PAPER, Dec., 1955); refining of kraft pulp before and after washing at Container Corp. of America by George Whiteside, pulp supt. at Fernandina; and a discourse on the role liners play in scoring and folding corrugated board by R. C. (Bob) McKee, Institute of Paper Chemistry.

HOW CONTROLS SAVE WOOD—Mr. Cohn told how automatic controls have enabled St. Regis to cut wood use from 1.7 cords per ton of pulp down to 1.64 cords, a saving of about $295 a day. And larger volume can be handled by use of controls. Before controls, 6,200 gals. of liquor (39% of cubic content) was used. With advent of controls, this jumped immediately to 7,300 gals. (44.3%).

Uniformity also improved with controls, said Mr. Cohn. Before controls, 17-point differentials with 9.97% rejects were not uncommon. Now differential rarely goes above 1½ points with rejects stabilized at 1.75% to 2%. With controls, St. Regis noted a decided increase in tensile strength and tear, although no significant change in mullen.

HOW CONTAINER CHANGED REFINING METHOD—George Whiteside described methods used in refining before and after washing. The Fernandina Beach plant converted to hot stock refining in July, 1953. By using pre-refining methods, yield increased from 14 tons machine dry paper per digester to 16.5 tons. Wood consumption dropped from 1¼ units per ton to 1.08 units. Solid for recovery boiler decreased from 3,100 units per ton to 2,300 units. According to Mr. Whiteside, there was an increase in power required for washed stock refiners and a slightly lower freeness required for the same mullen. After two years of operation, it was decided

SPOTLIGHT ON SPEAKERS—R. C. (BOB) McKEE, head of Container Div., Institute of Paper Chemistry, in pensive mood; R. G. COHN, Asst. Pulp Mill Supt., St. Regis at Pensacola, showing slides; GEORGE WHITESIDE, Container Corp.'s Pulp Mill Supt., answering question; GEORGE REYNOLDS, Plant Engineer, Rome Kraft, displaying colored slides of plant's "new concepts"; C. A. (CHICK) SHOUDY, Asst. Mgr. at West Virginia Pulp & Paper's Charleston mill, extends greetings.

ROYAL WELCOME—International Paper's IVAN SIMS greets more than 250 members of Southeastern TAPPI at Friday meeting. At left, Chairman C. N. ROGERS, Sonoco Products face partly obscured by "mike"; at right, R. R. (DICK) CHASE, Program Chairman, of Union Bag & Paper.

to shift to refining after washing.

Since refining has followed washing, Mr. Whiteside pointed out that there has been no change in digester, evaporator or recovery operation. Stock going through plug refiners and to washers operates under lower pressure and plug refiners do not require repacking. Maintenance on refiners and discs has lowered. Increase in residual soda content is not more than 5 lbs. salt cake per ton of pulp. Since the change, slightly more power has been required for refining with a slightly lower chlorine number. The desired end, he said, "is reduction in power required for refining and an increase in yield, uniformity and quality of pulp."

NEW CONCEPTS — Using colored slides, George Reynolds described some of the new ideas used in the construction of the Rome Kraft mill, among them the new wood control tower in the woodyard, new chip storage bins which almost double the volume (both sides are angled to 45°) and the valveless washers which, he pointed out, can be located lower than the barometric type. (These were illustrated in PULP & PAPER's December article on the mill.)

Dr. McKee discussed briefly the history of liner board and then described, with slides, the difficulties of folding panel and flat scores. Slides showed stress test on liner boards and the results of some of these tests. Dr. McKee said that these experiments are still being conducted at the Institute.

A New Use for Kraft Soap

PULP & PAPER's first-hand report on how manganese ore treatment plant pioneers use of mill by-product

• Opening up a new market for kraft mill waste products is the new $1,000,000 manganese flotation mill and nodulizing plant built by Manganese Inc., at Henderson, Nev.

Because of interest aroused in the kraft pulp industry, PULP & PAPER has obtained a special report direct from Henderson on how kraft pulp soap skimmings are used there. Manganese Inc. is a pioneer in the field of treating manganese oxide ores, and its soap flotation system is big news in the mining world.

The 1,200-ton plant consists of crushing, grinding, double flotation, filtration and kiln or nodulizing sections.

Two-stage crushing is followed by two 600-ton identical grinding and flotation circuits. The flotation process involves conditioning with sulfurous acid, which serves as an activator, and soap filtration. The sulfur dioxide, in 3% water solution, seems to condition the surface of manganese oxide particles, possibly by formation of a manganese sulfate surface on the particle. A soap emulsion, added just ahead of the pulp conditioning step, serves as a collector and frother.

This emulsion is a water suspension of kraft soap skimmings, diesel oil and oronite. The dry reagent proportion of the collector is 71.8% diesel oil, 26.1% soap and 2.1% oronite. The emulsion is diluted and fed at 20% strength through metering pumps and rate indicators. Consumption of the collector is huge and has averaged over 250 lbs. per ton of feed.

This emulsion is made up in a separate plant. The soap skimmings are shipped to the plant from kraft operations and stored in a 100,000 gal. tank. Oil is stored in a bigger tank, oronite in a much smaller one. Soap skimmings and oronite are mixed with water to form a 50% suspension in Denver conditioners. Oil is added. The emulsion, diluted to 20% strength, is then pumped to a 42,000 gal. reservoir at the mill.

S. J. McCarroll is general supt.

250 TAPPImen turned out for Charleston session. At left, JOHN VICTOR, Gen. Supt. of St. Regis, Jacksonville. Behind him, JACK CHANDLER, Atlantic Beach, Fla., rep. for Sveen-Pederson Co., and behind him W. S. (PAT) YUNKER, E. D. Jones Co. That's CURTIS GREENE, of Link-Belt, in center pic; PETER BORLEW, Tech. Dir. at National Container's Jacksonville plant, at right.

Kimberly-Clark's First Far West Mill Impressive

Kimberly-Clark's new tissue paper mill and converting plant at Fullerton, Calif., was fast nearing completion in February as the building of main structures was completed and installation of equipment proceeds, including pulp preparation equipment. Pacific Coast market mills will supply pulp.

Impressive gray and tan porcelain enameled steel panels have been put into place as exterior walls. Large expanses of glass are in place on the north wall of the paper machine room. The plant is on a 60-acre site midst groves of oranges.

New High Offices Created by Reliance Electric

Elected to higher offices created by directors of Reliance Electric & Engineering Co. are Edward E. Helm, now vice president and general manager, and Charles R. Sutherland, controller.

J. W. Corey, Reliance president, said the purpose "is to have a more effective top organization to carry out expansion and other plans."

Mr. Helm joined Reliance in 1925 and has been sales vice president since 1946. One of his additional duties has been to co-ordinate the Reeves Pulley division with other divisions.

Appointment of Richard A. Geuder to general sales manager and of Earl C. Barnes to assistant chief engineer were also announced by Reliance. Mr. Geuder has been assistant general sales manager for the past year, previously manager of industry sales. He will report directly to Mr. Helm.

Joe Shouvlin a Delegate

J. C. (Joe) Shouvlin, president of The Bauer Bros. Co., is sure to make a West Coast trip in August, which he expects will take him to some mills. He's a delegate to the Republican National Convention in San Francisco from Ohio.

TWO PROMOTIONS AT CHAIN BELT CO., Milwaukee, Wis., are announced by A. R. Abelt, Vice Pres., Sales. Appointed to new position of Mgr.-Market Dev. and Sales Training is W. B. MARSHALL (left), formerly Sales Pro. Mgr. He will assist in general sales management as related to market potentials, research, and field force training.

G. H. PFEIFER (right), is appointed to the new position of Mgr.-Sales Pro. and Advtg. He was former Advtg. Mgr. He will head advertising and sales promotion for all five divisions.

Synthetic Adhesives Take Coating Conference Spotlight

Synthetic adhesives take the spotlight at TAPPI's 7th Annual Coating Conference May 7-9 at the Benjamin Franklin Hotel, Philadelphia. May 10 is set aside for tours of DuPont and Hercules laboratory establishments.

A highlight of the meeting will probably be a paper presented by **Life** magazine. Time-Life magazines spend over $40,000,000 a year for coated and printing papers. An exclusive story on their Springdale, Conn., laboratories, whose discoveries may save Time-Life $10,000,000 a year in paper, printing and production costs featured the July, 1954 issue of PULP & PAPER.

F. H. Frost, S. D. Warren Co., heads a panel to discuss what qualities the industry desires in adhesives.

Starches, caseins, resins, latex, etc., will all have their spots on the program with papers explaining new applications, improved uses, etc.

Program chairman is J. T. Loomer of Robert Gair Co.

Paper Makers Create Special Fund for Organizing

Paul L. Phillips, recently reelected president of the Paper Makers union, has announced a special organizing fund of $100,000, to be allocated at rate of $10,000 a month, to bring new members into the union and to spread its story. The defense fund of the union was expected to reach the constitutional limit of $500,000 this summer, at which time 25 cents per capita will be transferred to the new organizing fund.

GRANITEX

TOUGHENS, DUSTPROOFS
CONCRETE FLOORS

Granitex Penetrates Into Pores of Concrete, Figuratively "Vulcanizing" The Surface

Your concrete floors can be *tougher, dustproof* . . . and *oil proof*. One product, Granitex, does all three jobs at once, by penetrating the concrete surface and *sealing* it against wear and tear! Granitex owes its toughness to Devran (epoxy resin), the miracle ingredient that has made other Truscon products outstanding in performance under severe exposures!

A ball of pure Devran is more resilient than a golf ball . . . will bounce higher when dropped on a concrete floor. It's Devran that enables Granitex to "bounce back" after being subjected to harsh treatment, both physical and chemical.

GRANITEX PROTECTS YOUR PRODUCTS
It prevents "grit and dust damage" to your products by thorough "surface binding" your concrete floors. Thus, Granitex cuts production and processing costs . . . increases your profits. Clean, sanitary concrete floors are morale builders, too.
Employees just naturally appreciate dust free, attractive floors.

TRUSCON Laboratories
Industrial Maintenance Division of Devoe & Raynolds Co., Inc.

Send coupon now for free demonstration in your plant. No obligation to you.

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INDUSTRY NEWS OF WORLDWIDE INTEREST

BIG EXPANSIONS IN RAYON IN U.S.A.—Three firms which are big users of high alpha woodpulp have announced expansion programs. American Viscose Corp., the biggest producer of rayon in the world and biggest user of dissolving woodpulp, was planning a 90,000,000 lb. rayon expansion. Courtauld's, British firm with a project in Alabama, U.S.A., was planning to increase its capacity for rayon staple by 100,000,000 lbs. annually. American Enka Corp. is planning a new 50,000,000 lb. rayon staple fiber production unit at Morganstown, Tenn.

These will raise U.S.A. capacity for rayon staple by 240,000,000 lbs. or 63% over current capacity, according to Textile Organon, statistical publication of the man-made fiber industries. Last year U.S.A. production of rayon staple soared 43% over 1953 output, to a record 311,500,000 lbs. Demand was running far ahead of last year.

MORE PULP MILLS IN SWEDEN—Three new kraft mills, totalling 200,000 tons of pulp annually, will be completed in Sweden by 1958. They will be at Moentsteras, built by Forest Owners Federation; Otterbacken, by Statens Skosindustrier, and Skarblacka, by Fiskeby Co.

SUTHERLAND OFFICES IN BAHAMAS—A "sterling area" office for Sutherland International Ltd., associate firm of Sutherland Refiner Corp., is at 309 Bay St., Nassau, Bahamas. Its refining, high yield systems, etc., are now used in eight countries in Europe and Africa.

MORE SWEDISH CELLULOSE IN TEN YEARS—Erik Severin, chairman of a Swedish Parliament forest committee, says Sweden's pulp output will increase by 500,000 tons in ten years and will change to continuous operations. He predicted pulp sales would gross an additional $70,000,000 (or Lbs. sterling 24,000,000).

NEW WHITING EXPORT DIVISION—Whiting Corp., Harvey, Ill., makers of cranes, monorail systems, Tracmobiles for moving freight cars, chemical processing equipment such as pulp mill washers and evaporators, has a new export division at 30 Church St., New York City, (7), U.S.A., cable address "Whitinjack." Don Polderman, vice president and director of foreign sales, says Whiting now has sales offices and plants also in Argentina, Australia, Brazil, England, France, Sweden, Holland, Italy, South Africa and Switzerland.

NEW BLACK-CLAWSON OFFICES—Black-Clawson Cos. Export Dept. announces a new sales representative for its line of major pulp and paper making equipment: Parsons & Whittemore (France) at 5 Rue Jean Mermoz, Paris 8E, where Pierre Burkhardt is manager. This office will also represent B-C in Belgium, Spain, Portugal and Greece.

NEWSPRINT FOR SOUTHERN AFRICA—Representatives of Bowaters, London, manufacturers of newsprint in U.S.A., Canada and England, are reported favorably impressed by fast growth and quality of pine forests near the capital, Mbabane, in Swaziland. Pulpwood thinnings can be cut in 6 years. London Colonial Development Corp. owns the 80,000 acre forest and has been heavily planting it, expects pulp and lumber production in full swing by 1960. Richard Sandwell, Canadian engineer, also recently looked over newsprint potentials of pine forests in the Sabie area of Eastern Transvaal.

NOTICIAS MUNDIALES DE LA INDUSTRIA

PROYECTOS PARA MAS RAYON—Tres empresas consumidoras de pulpa alfa en grande escala están realizando trabajos para incremento de producción. La American Viscose Corp., mayor productora de rayón y mayor consumidora de pulpa para disolver del mundo entero, tiene proyectados planes para aumentar la producción por 90.000.000 lbs. La empresa inglesa Courtauld's tiene un proyecto en Alabama, EUA, para aumentar la capacidad de hebra por 10.000.000 lbs. anuales. La American Enka Co. establecerá una nueva fábrica con capacidad de 50.000.000 lbs. de hebra en Morganstown, Tennessee, EUA.

Dichos proyectos aumentarán la capacidad nacional por 240.000.000 lbs., o sea el 63% más que el actual, según la revista Textile Organon. En 1954 la producción norteamericana ascendió al record de 311.500.000 lbs., o sea al 43% más que en 1953. La demanda actual sobrepasa la del año pasado.

MAS FABRICAS EN SUECIA—Se terminará construcción de tres fábricas nuevas de kraft en Suecia antes del fin del año 1948, siendo la de Moentsteras de la Forest Owners Federation; en Otterbacken de la Statens Skosindustrier, y en Skarblacka de la Fiskeby Company.

SUTHERLAND A LAS ISLAS BAHAMAS—La Sutherland Refiner Corp., dependencia de la Sutherland International Ltd., ha establecido una oficina para servir los países de la región esterlina en Nassau, Islas Bahamas, 309 Bay St.

MAS CELULOSA DE SUECIA—Dice el Sr. Erik Severin, jefe de una comisión forestal del parlamento Sueco, que diez años adelante la nación producirá 500.000 toneladas más de pulpa, y se harán contínuas las operaciones. Calculó que se realizarán entradas de 70.000.000 dls. o sean 24.000.000 libras esterlinas mediante la venta de pulpas.

EXPORTADORA WHITING—La Whiting Corp., de Harvey, Illinois, EUA, fabricantes de grúas, monorieles, tractores para jalar vagones de carga y otros equipos, ha establecido oficina de exportaciones en 30 Church St., Nueva York 7, EUA, con dirección cablegráfica Whitinjack. Declara el Sr. Donald Polderman, vicepresidente director de ventas en el extranjero, que la Whiting actualmente tiene oficinas y plantas en Argentina, Australia, Brasil, Inglaterra, Francia, Suecia, Paises Bajos, Italia, Sud Africa y Suiza.

OFICINAS BLACK CLAWSON—Esta conocida empresa anuncia el nombramiento de nuevo representante, Parsons & Whittemore, 5 Rue Jean Mermoz, Paris 8E, a gerencia del Sr. Paul Burkhardt.

PAPEL PERIODICO PARA AFRICA—Complacidos se declaran los representantes de la Bowaters London, contemplando el desarrollo de los bosques de pino cerca de Mbabane, capital de Swaziland, y la buena calidad de la madera. Leña para pulpa puede cortarse en seis años. Los bosques, que abarcan 80.000 acres, son propiedad de la London Colonial Development Corp., y se han hecho extensivas siembras, de modo que ahora se espera producir pulpa y madera en plena escala para 1960. En la región Sabie del Transvaal Oriental, el Sr. Ing. Richard Sandwell hizo inspección de los bosques de pino mirando a la producción de papel periódico.

SPECIAL PULP & PAPER FEATURE

How To Do It

Pretty Messy Stuff

If you're having trouble with mill housekeeping, try this idea used at the Camp Mfg. Co., at Franklin, Va. "Sloppy Joe"—the pig—is a fast moving porcine. He gets around, from one department to the other. Weekly inspections determine which department at the mill is the biggest mess. They win the "Sloppy Joe" for the week—and it must be prominently displayed. Competition is keen—to lose the award.

How Ohio Boxboard Gets Long Battery Life

Ohio Boxboard Co., Rittman, O., uses 77 industrial trucks to move a variety of raw, in-process and finished stock, with 3-shift operation six and seven days per week in most departments.

Ohio Boxboard achieves long, low-cost battery life of 6½ to 8½ years by providing three batteries for each truck. One battery per truck is in the truck, one is being charged and one is "resting" or cooling off ready to go into the truck for the next shift.

The truck and its three batteries are chargeable to the user department. Each battery is numbered and is used only in the truck to which it is assigned.

Large batteries for rider-type trucks are charged on the ground level floor. Ventilation is provided by large fans in the mill which are used primarily to circulate air around the paper machines.

Smaller batteries for the powerized floor trucks are charged on the first floor to reduce the distance travelled to the battery room to a minimum.

Rider-type trucks have ampere-hour meters with indicator lights which show when the battery is approaching a discharge state.

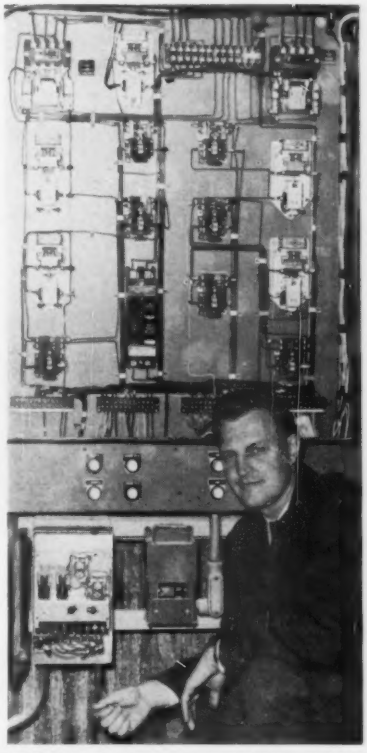
Batteries for powerized hand trucks are handled by a hoist which reaches all parts of the rack. OBC uses a spreader bar of its own design for lifting these batteries, characterized by a unique combination of a heavy cross bar of wood and metal hooks. Batteries for rider-type trucks are lifted from the truck by a stationary hoist, put on a pallet and moved to the charging station by a fork-lift truck. Large batteries are charged right on pallets.

Designs New Shut-off For Loading Loose Pulp

Committments requiring transport of loose groundwood pulp in truck semi-trailers at Crown Zellerbach Corp.'s Camas, Wash., mill presented difficulties at the loading point. An automatic shut-off was needed for stopping the loading when the receiving trailers became filled. Staff engineers tried out varied available shut-off equipment. None proved successful because this pulp did not effectively transmit control signals.

A plant electrician, Richard Drewfs, assistant electrical engineer, designed and built an electronic relay using electrodes mounted above the semi-trailer loading positions. When the loaded groundwood pulp builds up to this level and contacts and electrodes the control system automatically shuts off that conveyor and, at the same time, cuts in a second conveyor discharging to another semi-trailer. In case of no empty in alternate loading position, the loading stops when the first trailer becomes full.

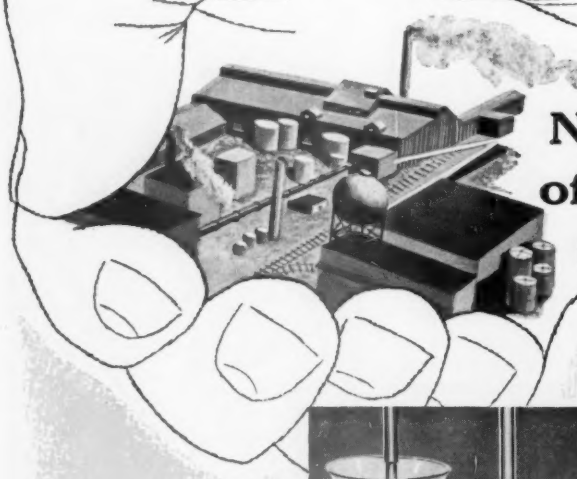
Crown Z presented Mr. Drewfs with a $100 suggestion award for this "How to Do It."



DESIGNED NEW CONTROL—RICHARD DREWFS, Asst. Supervisor of Electrical Maintenance and Operation, alongside electronic relay he developed for automatic control of groundwood pulp loader at Crown Z's Camas mill.

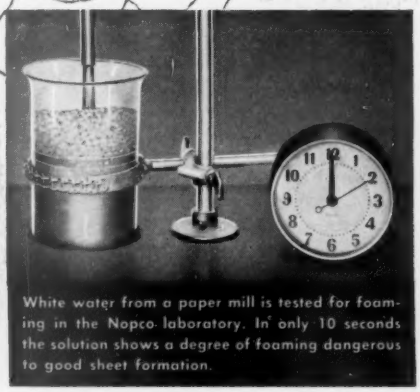
HOW FEEDER SHUTS OFF AUTOMATICALLY—Automatic controls of groundwood pulp loader at Camas, Wash. CZ mill shut off feeder when pulp in semi-trailer builds up high enough to contact electrodes. (One set visible at upper left.)

Why do we bring your mill into our laboratory?

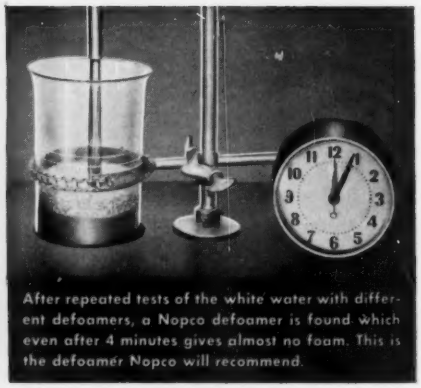


To select from Nopco's great variety of defoamers, the one that's right for you

and here's how we do it



White water from a paper mill is tested for foaming in the Nopco laboratory. In only 10 seconds the solution shows a degree of foaming dangerous to good sheet formation.



After repeated tests of the white water with different defoamers, a Nopco defoamer is found which even after 4 minutes gives almost no foam. This is the defoamer Nopco will recommend.

Nopco well knows that an excellent defoamer in one paper mill may be an indifferent performer in another. Since our aim is always to reduce foaming to the minimum under any conditions, we have set up testing techniques which in effect "bring your mill into our laboratory."

We do this by testing samples of white water from your mill, with every potentially effective defoamer—including if you like, the one you are now using. When we have finished these exhaustive and accurate tests, we *are able to determine scientifically* which defoamer will give *your* mill the best fibre distribution, fewer breaks, higher machine speeds, and improved sheet formation that is your due.

Nopco, the very first to make a chemical defoamer for the pulp and paper industries, has an unrivalled wealth of first-hand experience—and the widest variety of defoamers, both paste and liquid. Why not *make sure* you have the best possible defoamer, by consulting Nopco today?

Nopco Chemical Co., 428 Water St., Harrison, N.J.

NOPCO

PLANTS: Harrison, N. J. • Cedartown, Ga. • Richmond, Calif.

Woodpulp Commerce – As A Consumer Sees It

Market producers and buyers are finding they have common interests and goals. Discussions clear the air

BY WILLIAM BECKETT

Executive Vice Pres., Beckett Paper Co., and former Pres., Assn. of Pulp Consumers, Inc.

(Written especially for PULP & PAPER)

● The general subject of market woodpulp is, of course, always of the most immediate and, from time to time, of critical interest to many of us who depend altogether, or in large part, on market woodpulp for our source of papermaking fiber.

I shall try to express the spirit in which so many of us have, for many years, been striving for common goals through the Association of Pulp Consumers. If anything I may say here does not entirely conform to the views of other members of the Association, I shall be very sorry, but I rather doubt that there will be any important points of difference.

The assurance of a continuing supply of market woodpulp is as essential to us, who depend upon it for our furnishes, as the assurance of a continuing supply of timber is to the market woodpulp producers themselves.

IN INTEREST OF WHOLE COMMUNITY—We who buy our pulp produce an important proportion of the fine paper and paper specialties required in the United States. Thus, we feel that an assured future supply of market woodpulp for papermaking is in the interest of the whole community, as well as in our own interest if we are to survive as a segment of the paper industry.

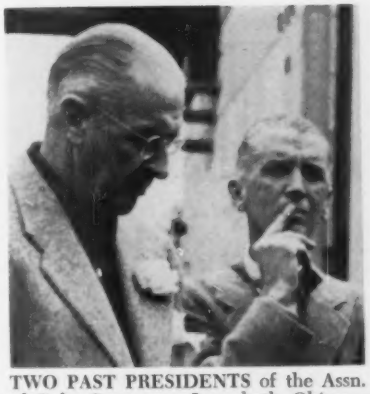
There are many ways in which we smaller papermaking units, buying carefully selected and assorted grades of papermaking woodpulp from our regular suppliers, can serve the buyers of fine paper and paper specialties far more satisfactorily than can the very large, integrated units. Great machine widths and high speeds make it impracticable or impossible to furnish small amounts of special sizes, weights, finishes, colors, and qualities, and in a big integrated mill, the available papermaking fiber may be substantially limited to that being produced at that location. For fast service, flexibility of scheduling, easy adjustment of all machine variables to achieve quality regulation, and practicability of carrying large, highly assorted stocks for immediate shipment, we feel we have and will continue to have an advantage over the very large units.

In the graphic arts field there will always be a demand, very large in the aggregate, for relatively small parcels of fine printing paper to be delivered at once. This is our natural field, and we feel fully competent to serve it.

"AN EARNEST OF OUR FAITH"—Our major aim, during the past 15 years or so, has been to encourage the production of market woodpulp in ever-greater quantity. We have endeavored to convince suppliers of market woodpulp that their customers are eager to buy more pulp from them, and that we are capable of doing so. As an earnest of our faith in our own future ability to buy this pulp, and in our suppliers as a future source of papermaking fiber, the long-term contract was devised, and adopted, and it has been gratifying to note the consequent very great increase in the productive capacity of the market pulp industry in the past few years.

We have encouraged our suppliers to discuss with us the questions of pulp and paper economics, and have found these discussions most informative and helpful to a better understanding on both sides. I think it may be safely said at this time that the consuming paper mills have been successful in presenting the point that if the pulp suppliers can provide market pulp at a price which will permit our paper mills to compete with the large integrated concerns, our future together seems reasonably secure.

If the consuming mills find their pulp costs so much higher than those of the integrated competition that they cannot make a profit, they will go out of existence, forcing the market pulp producers to go into the paper business. They cannot go into the kind of business where a great many of their customers now operate, since, as I have noted, the demands of a large segment of the graphic arts industry cannot feasibly be met by very large high-speed mills. They would have to try to invade fields where highly efficient, large, modern operators are already producing enormous amounts of boards, white paper, and various grades of publication stock. This would not be easy, and



TWO PAST PRESIDENTS of the Assn. of Pulp Consumers Inc., both Ohioans, listening to a guide describing operation at a Western pulp mill. CARLTON W. SMITH, President of Moraine Paper Co. (left, and WILLIAM BECKETT, Exec. Vice President of Beckett Paper Co. (right).

How This Article Came About

Eds. note—The future of North American market pulp is vital to some 230 or more dependent paper mills in the U.S.A.—as well as to many mills abroad. Back in 1950, William Beckett, then president of the Association of Pulp Consumers Inc., and Karl A. Clauson, then secretary-treasurer of the Consumers group, went to the Pacific Coast, where most of the market pulp in America is made, to urge expansion of pulp production.

Last fall he went again, on a memorable tour led by Pres. Lane Taylor of the Consumers and of W. C. Hamilton & Sons, and Reed Porter, Mr. Clauson's successor (see PULP & PAPER, Oct. 1955 for full report).

Mr. Beckett was one who agreed the producer-consumer relationship has steadily improved over the past 15 years or so. So PULP & PAPER felt it was fitting to invite him to express his views on a subject of such importance to so many paper mills—and to the pulp mills, too, for that matter.

would not likely be profitable.

FINDS AGREEMENT ON LONG TERM BENEFITS—Our conclusion is that the market pulp producers have a wonderful opportunity, by operating large and efficient mills and by selling their product at a price which is advantageous to their customers, to maintain profitable production and sales for an indefinite period into the future. Many producers with whom we have talked about these matters seem to feel much the same way, and have shown this by expanding their operations and improving their product to their, and to their customers', mutual benefit.

Cordial good will, the inevitable outcome of clear and close understanding, now exists on a wide scale amongst market pulp suppliers and their customers. It is a genial climate in which to do business, and for my part, I can think of no group of business men with whom I would rather exchange goods, dollars, and industrial confidence than the astute and amiable members of the pulp-making and pulp-purveying fraternity.

THEN it's time to investigate SENTRY®—the first high speed, continuous moisture detector to utilize the dielectric property of paper in an entirely new electronic circuit—a circuit which produces a signal of greatly increased stability regardless of grade of paper. Used singly or in conjunction with an integrated control system, SENTRY provides the "missing link" in your quality control program. Full width scanning, of course. Write TODAY for literature. Laucks Laboratories, Inc., 1201 Poplar Place, Seattle 44, Washington.
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All Records Fall In Pulp Production

U.S.A. woodpulp production was a record 20,798,259 tons last year, a sharp gain over the previous peak of 18,230,682 tons in 1954. The U.S. Pulp Producers Assn. notes this is the third consecutive year that output hit a new all-time high.

Bleached sufite paper grades output was 1,932,139 tons against 1,805,784 in 1954. Unbleached sulfite pulp rose to 603,058 tons from 579,099 in 1954.

Unbleached kraft pulp climbed to 7,680,578 tons from 6,807,989. Bleached kraft pulp paper grades amounted to 3,229,717 tons last year, against 2,709,685 in 1954. Semi-bleached kraft pulp was 399,312 tons, compared with 311,965. Dissolving woodpulp amounted to 980,875 tons in 1955, compared with 774,090 in 1954. Soda pulp was 440,439 tons against 431,647. Semi-chemical pulp was 1,403,976 tons and 1,125,464 in 1954.

Bill Schnorbach Settles In Greenville, S. C.

William L. Schnorbach, assistant to the manager of development (Vice Pres. C. S. Huestis of Southern Paperboard Corp.), has permanently located with his family at Greenville, S.C. Mr. Schnorbach was former manager and also formerly headed engineering at the Filer City, Mich., mill (now American Boxboard) which his father helped to found and to build many years ago

Conkey Type Evaporator Has Big Year at Appleton

During 1955 the Rosenblad Conkey switch-system evaporation plant operated by the Appleton, Wis., sulfite mill of Consolidated Water Power & Paper Co. produced 9,930,000 gals. of sulfite concentrate, a new high record. The unit processed 60 million gals. of digester-strength spent sulfite liquor, evaporating off 50 million gals. of water to yield almost 10 million gals. of concentrate.

This is the Conkey type evaporator now manufactured in this country by Chicago Bridge & Iron Works Conkey evaporator division.

Fired under boilers at Appleton, the concentrate provides steam to operate the evaporators and any surplus can be used to make processed steam for the mill.

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Our technical staff will be glad to help you find the right colors—and the most economical colors for all of your tissue products. For complete information, write E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Delaware.

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ATTEMPT TO CORRAL BIG FIRE IN GEORGIA. Tractor-drawn plow gouged out this furrow near Waycross, Ga. American Forest Products Industries Inc., supplying picture, says mechanical equipment is necessary to fight fires efficiently .

TRACTOR AND PLOW GO INTO ACTION. Fighting a forest fire in extreme Southeast pulpwood area of U.S.A. To halt a fire quickly, such equipment is needed. This one is digging a wide furrow. Quick action is needed to catch arsonists, too.

NO. 1 PROBLEM ALL THROUGH THE SOUTH. Get that arsonist, writes Mr. McCaffrey. He says State Police should operate as they do in North Carolina—alert to catch fire bugs, and work in force.

FIRE RUNS WILD IN TEXAS WOODS. Find out why such fires start, says Mr. McCaffrey. This one killed millions of seedlings, damaged many trees, says Texas Forest Service-American Forest Products Industries, Inc., which supplied picture.

THE SOUTH'S NO. 1 PROBLEM:

Catch That Arsonist! Speed Justice!

"We have failed somewhere along the line in not knowing why these people set fires. Resentment can be traced."

By J. E. McCAFFREY
Vice Pres., International Paper Co.

● The No. 1 problem of practicing forestry is the uncontrolled forest fire.

Forest fires are the bane of our existence, and unless we make much more progress towards reducing these fires in the next few years than we have made in the past 25 years, we are going to be in serious trouble for our wood supply.

All know that our wood requirements are increasing by leaps and bounds and if there is any doubt as to the Stanford Research Institute Report being on the high side in the South, you have only to look to the State of Alabama to see how outdated that report will be if applied to that state. (The SRI predicted wood needs in the South would double in 20 years.) Within the past six months every paper mill in Alabama has announced plans that would greatly increase their consumption, plus two new mills to be built, so that when this expansion is completed in the next year or so, twice as much pulpwood would be used as was consumed in Alabama in 1954.

We have made some progress in

combatting this problem. I do not want to take any credit from the fine job in education, pre-suppression and suppression work being done by the various federal, state and private agencies. Certainly more people are forest fire conscious, the acreage burned has been reduced, modern equipment and communications have been developed and a good foundation is being laid for future generations through education work in the schools.

82% OF FIRE AREA IN SOUTH—In spite of this work the number of forest fires is rather constant and amazingly high. Last year 7,200,000 acres burned in the eleven Southern states—82% of the total area burned in the entire country. Although the acres burned per fire has been lowered somewhat each year, it is only through advances in fire detection, communication and suppression that the acreage burned has been reduced. We are still having about the same number of fires and each is potentially a large fire. Apparently, we are not reaching the people responsible for these fires, and if we are going to accomplish our goal of reducing the number of fires in the South, we must develop new methods of action.

I would suggest the following:

(1) Concrete action on the part of industry to instigate enforcement of existing fire laws and strengthen these laws where necessary. The support of all law enforcement agencies is necessary to do this.

(2) An attempt to better understand the attitude of local people about the large landowners in their area, and why we as forest landowners continue to have our land burned. We have failed somewhere along the line in really knowing why these people set fires.

We are going to have to change our concept that successful approaches to the fire problem in one area will give the same results everywhere else. An illustration would be the methods of approach and action in the Piedmont areas as contrasted to the Southern coastal areas. Disastrous fires occurred in the coastal areas from the Carolinas through Florida these past two years. Tremendous acres of fine timber were devastated. Much expense will be necessary to replant and put this area back into timber production.

SOMETHING MUST BE DONE!—True, the drought conditions were extreme and the land ownership is different on the coast than in other areas, but the fires were started and the damage done. Sometimes it looks to me as though our efforts have been a failure. We can't go on having 25,000 and 50,000 acre fires very long and still have a wood supply. It doesn't make much difference if we have 2,500 ten acre fires, or one 25,000 acre fire—the fact remains we are still losing the timber. Something has to be done.

J. E. McCAFFREY, who discusses what many Southern pulp and paper leaders agree today is their No. 1 problem. Mr. McCaffrey participated in panel discussions on the problem at the Southeastern industry's recent Community Relations meeting in Atlanta and at a Southern Forestry Congress in Savannah. Fires have increased alarmingly in the South.

There are many discussions on this problem but, like the weather, there seems to be a lot of talk but not too much accomplished. It is time for industry to take action—definite and concrete action—and as an example I would like to tell you about the results of one such meeting I attended.

The tremendous fires in North Carolina last spring resulted in a group of top management men in the pulp and paper industry in that state meeting with Governor Hodges to see what action could be taken to stop these fires. It wasn't just a "talking conference" or a "good will visit," but a discussion with the governor to get concrete action started on this problem.

WHAT NORTH CAROLINA DID—Two proposals made by the governor and immediately placed into action at his direction can be expected to produce far reaching effects.

(1) Sheriffs and magistrates are directed to enforce existing fire laws and not to be lenient with local citizens charged with these offenses.

(2) The State Highway Patrol is instructed by the governor to stop and investigate forest fires, report on their origin, radio the nearest fire warden and otherwise help.

"CALL A SPADE A SPADE"—Some people will say you can't stop forest fires by legislation. I think we should call a spade a spade—if it's a deliberately set fire, it is the work of an arsonist. If existing fire laws are enforced then these can be strengthened, but we surely can't expect stronger laws until we get enforcement by sheriffs, judges and juries of laws already on the books. When public opinion is against setting forest fires and laws are enforced there will be a reduction in the number of fires. When public opinion was against cattle and hog stealing and laws enforced, it stopped. Forest fires can be reduced in the same way.

I think the action of the State Highway Patrol can be particularly effective. The immediate effect of reporting and investigating forest fires on the spot will be very helpful in quicker suppression and better investigation of fires. I also think the mere presence of the Highway Patrol and knowledge that they will investigate forest fires will surely cause people to think before setting these fires. Anyone who has driven in North Carolina lately knows they have a large Highway Patrol force!

THE BIGGEST MISTAKE—In looking back on what we have done and not done toward solving the forest fire problem in the South, it seems our biggest mistake has been a lack of understanding of why the fellow setting the fires feels as he does. We spend lots of money aimed at changing his viewpoint or reasons for burning—posters, radio programs, bumper strips, movies, news articles and many others. Maybe all this has been done automatically without really trying to understand his viewpoint. No doubt a lot of this feeling of resentment against large landowners can be traced to company attitude on grazing, posting, fencing and other acts that merely antagonize local people. There is no doubt in my mind that many fires can be traced to this feeling of resentment.

I recall a particularly good example a few years back of the failure to understand or take into consideration the opinion and wishes of the local people. A large block of land belonging to my company in Arkansas was set aside as a game reserve at the request of the Conservation Commissioner. Nothing had been told in advance to the local people, and the first they knew was the appearance of a State game warden assigned to the area.

People who lived in the area for years were prohibited from hunting, and farmers' dogs were shot by the warden for running deer in the game preserve. The local people were incensed and threatened to burn our land to get even with the game warden. We had completely ignored the will of the people without considering their feelings and, using such an abrupt approach, the project was doomed to failure from the beginning.

It wasn't long before we had to cancel our agreement with the Game

Commission, and since that time we have refused to put our land in a game reserve unless the local people in the surrounding community are willing to do likewise.

TRY TO UNDERSTAND NEIGHBORS—Until people themselves want forest fires stopped it will really be an uphill fight. The paper companies want to be good neighbors in the local communities where they operate or own property. Our management of company timberlands is on a permanent basis producing continuous crops of trees that will be harvested by the local people. It seems that we should be able to convey to these people what kind of people we are and how we operate if we really try to understand them.

I would emphasize these two means of approach: (1) A sincere attempt to try to understand why local people feel as they do about large landowners and develop plans to get better acquainted, and (2) A plan of action such as carried out in North Carolina aimed at quicker suppression and investigation of fires.

SOUTH'S GRAVE FIRE PROBLEM is subject of discussion here between three speakers at Southern Pulpwood Conservation Assn. meeting. (L. to r) HENRY MARLSBERGER, General Mgr. of Assn., PAUL M. DUNN, Tech. Dir. of Forestry for St. Regis, and CLINT DAVIS, Chief of Information and Education, U. S. Forestry Service, Washington.

NEW PRESIDENT OF SPCA is N. W. SENTELL (left) of Southern Advance Bag and Paper Div. of Robert Gair, Inc., Hodge, La. He is shown with Mr. Marlsberger and K. S. TROWBRIDGE, retiring President, of North Carolina Pulp Co.

Southern Meeting Accents Fire Menace

● Stop forest fire! This was the keyword for leaders in the pulp and paper industry and forestry and conservation services when they met in Atlanta's Biltmore hotel and grimly discussed ways to cut down the tremendous fire toll in the Southeast.

Occasion was the annual Southern Pulpwood Conservation Association meeting, which attracts top personnel from mills throughout the South. On the second day, Clint Davis, chief of information and education for the U.S. Forest Service, opened the forest fire discussion by revealing that 85% of the nation's land razed by forest fires is in the South. And 95% of the fires which razed the South were intentionally set.

PANEL MEMBERS discuss fire prevention during two-day session. These two pictures show the panel members in action. Above, l to r, W. M. OETTMEIER, J. F. McGOWIN, J. B. LEWIS and GUYTON DeLOACH. Below, F. H. CLARIDGE, R. R. RICHARDSON and F. A. ALBERT.

Mr. Davis' talk set the pace for the daylong meeting that followed. It was highlighted by the speech of Paul M. Dunn, technical director of forestry for St. Regis Paper Co., and former dean of forestry, Oregon State College. As one woodlands manager told PULP & PAPER:

"Nothing concrete was decided—but everybody got some darn good ideas."

CALLS FOR RE-EDUCATION—Mr. Davis called for mass re-education to be concentrated on landowners of the future and today's small landowners. He attributed much of the South's destructive fires to farmers burning land so green grass will grow back for cattle, boys out on a lark—and malicious attempts to damage companies.

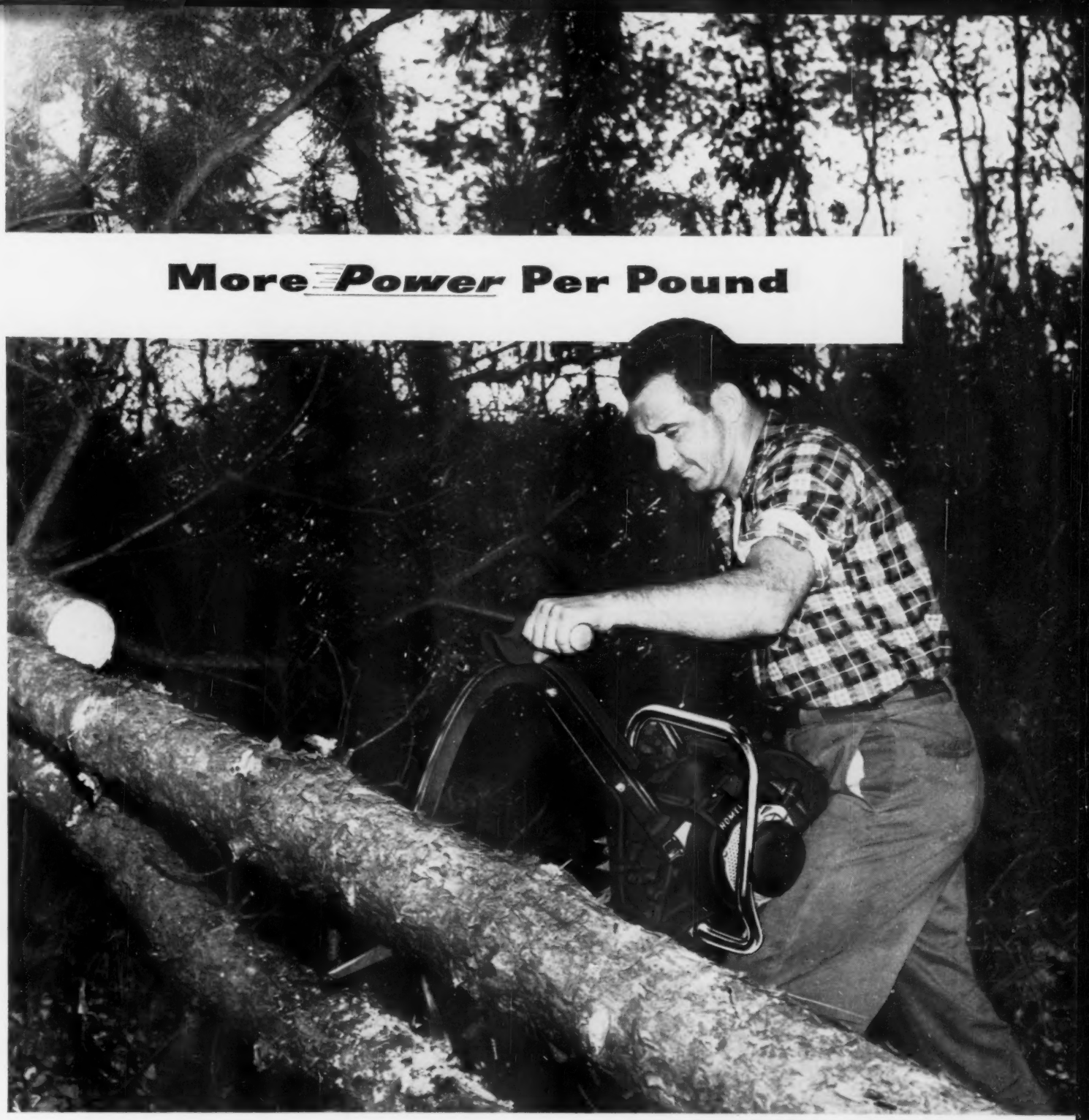
"People must be educated concerning the damage they are doing," he said. "Just because grand-dad used to burn his fields off is no reason why the people of today should go right on causing fires by inheritance."

Mr. Dunn suggested some practical means for setting up forest fire protection groups. He discussed Oregon's forest code, now recognized as an outstanding one (The State Forester has direct responsibility for the protection of 13,364,303 acres of forest land).

Actual fire control plans are prepared for three different fire situations (normal fire control for small fires, fires burning 200 acres or less, and large fires consuming more than 200 acres.) Detailed charts of the state, area and district organizations are distributed, which include lists of seasonal employees, logging and mill crews and industrial workers assigned to fight fires when necessary. Other prepared information includes wage and equipment rental rates, equipment inventories by location, radio stations in headquarters, cars and portable-mobile types (there are 780 in all), the legal subdivisions to be covered by the 71 special fire crews.

Fire-weather broadcasts are also an important part of the program—cooperation between the Weather Bureau and commercial radio stations enables them to broadcast regular fire weather information as well as special loggers' broadcasts throughout the season. Mr. Dunn also described another example of organizational cooperation in southern Oregon where 35 different companies with more than 85 mobile radio units work closely in spotting and fighting fires. Smaller operators provide equipment and men to actually do the fire-fighting.

"FORCE WON'T DO THE JOB"—Importance of research was stressed by Mr. Dunn, who said: "Brute force will not do the job adequately, technology and science are important



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keys." He said more information is needed about fire behavior, danger rating, fuel evaluation, weather, use of fire, techniques of control, drought evaluation and the effects of fire on soil.

He closed his remarks by telling the session that he formerly had laughed when it was suggested that a heavy concentration of Air Force bombers "bomb" forest fires with water. Today, he said, the idea with modifications is being successfully used.

A panel discussed ideas on fire fighting organization and control between state, industry and small landowners. They were F. A. Albert, U.S. Forest Service, Atlanta; F. H. Claridge, Raleigh, N. C., chairman of the Association of State Foresters; Guyton DeLoach, Atlanta, Georgia State Forester; R. R. Richardson, Riegel Paper Corp.; J. B. Lewis, Waycross, Ga., small landowner; J. F. McGowin, Chapman, Ala., lumberman, as a large landowner, and W. M. Oettmeier, of Superior Pine Products Co.

Earlier Henry J. Marlsberger, general manager of the association, said that the pulp and paper industry last year was responsible for planting 185 million trees, 46 million through private landowners. He said figuring this down to the cord, the industry planted 20 million more trees than it cut.

Meeting was climaxed by a banquet at which Lucian Whittle, Woods Division manager of Brunswick Pulp & Paper Co., was master of ceremonies.

Major Reshuffle of Timber in South

• Major reshuffling of forest properties in Louisiana-Arkansas-Texas has been revealed by Thomas S. Nichols, president, Olin Mathieson Chemical Corp., in announcing sale of 395,000 acres of forest land and two sawmill operations to International Paper Co. for $33 million cash.

Left to Olin is 635,000 acres of forest land centering around Monroe, La., where its Brown Paper Mill Co. kraft mill may have a dissolving pulp mill companion; a modernized large sawmill at Huttig, Ark.; a sawmill at Winnfield, La.; and, at Shreveport, La., two wood preserving plants and a flooring plant.

Starting in Jan., 1952, Olin Mathieson absorbed Frost Lumber Industries, Inc., Shreveport, La., reported as having at that time 450,000 acres of which about 50,000 was in Arkansas and the balance divided between Louisiana and Texas. With this, went the Huttig mill (Union Sawmill Co.); sawmills at Mansfield, La., Waskon and Nacogdoches, Texas; and flooring production and preserving facilities in Shreveport.

More recently, Olin Mathieson acquired Brown Paper Mill Co., at Monroe, with 465,000 acres of forest lands. Recently announced was acquisition of the sawmill facilities of Mansfield Hardwood Lumber Co., at Winnfield, La.; while that company's 93,658 forest land acres went to Robert Gair Co., for its expanding Southern Advance Bag & Paper Co. Div. at nearby Hodge, La.

WHAT EACH GOT—Now, International Paper Co. acquires the Mansfield, La., sawmill with large acreage of forest land serving it (perhaps 175,000 acres); the sawmill at Nacogdoches, Texas, with perhaps the balance of 175,000 acres. For International Paper Co. the deal places a substantial supply of pulpwood to serve its mammoth paper mills at Springhill, La., north of Shreveport, La.; Bastrop, La., and Camden, Ark.

Olin centralizes its operations, and obtains financing for mill advancement programs.

Custom of International Paper Co. in its deals of this type is to pass the lumber production facilities to an operator in that field by sale with supply of logs on a marked stumpage basis in accordance with forest management plans.

GAIR ALSO GETS TIMBER—Acquisition of 93,660 acres of forest land from Mansfield Hardwood Lumber Co. has been effected by Robert Gair Co., Inc., for its Southern Advance Bag & Paper Div. at Hodge, La., where it will start up a new paper machine about Feb., 1957. The sawmill and other production facilities had been sold previously to Olin Mathieson Chemical Corp.'s forest products division. Of the total, 77,822 acres were in fee ownership and 15,838 under management leases. Gair forest land holdings in the area now total 320,000 acres.

Wood Producer Gets His Tiger

ANTONIO SANCHEZ ALDANO, 35-year-old pulpwood and wood producer, now stationed at Coatzacoalcos (Puerto Mexico), on Gulf of Campeche side of Mexico's narrow isthmus, sent PULP & PAPER this picture. "One of the little tigers," he wrote in explanation of this "extracurricular" activity while logging in tropical jungles. He wrote P&P that he would like to send fir and "pinabete"—which he was clearing away for a coast highway and farms—to U.S.A. mills and laboratories for testing as potential pulpwood resources. The wood could be shipped by sea. An engineering graduate of California's U. of Santa Clara, Mr. Aldana's address is: Juarez 7, Dept. 4, Coatzacoalcos, Ver., Mexico.

"Rain-Maker" For Ocean Falls; Rain Closes West Linn

Crown Zellerbach Canada Ltd. has retained a commercial rainmaking company to induce rain for its Ocean Falls, B. C. paper mill where a record dry winter has lowered the level of Link Lake and reduced the mill's hydro-electric power forcing its two newsprint machines to be cut back from seven to five day operations. North American Weather Consultants, Santa Barbara, Calif., will seed cloud formations from eight ground generating units.

Too much rain, meanwhile closed Crown Zellerbach's West Linn, Ore. mill temporarily. Storms sent Willamette River to its highest foot level in 22 years. Substantial newsprint tonnage was lost.

How to Cut Costs in Lumber

The National Lumber Mfrs. Assn. urges lumber or wood product manufacturers pinched by higher wages or an increase in other operating costs, to adopt product diversification.

It offers a 394-page Forest Products Research Guide, 1956 Edition, $15 a copy from NLMA, 1319-18th St., N.W., Washington 6, D.C. It suggests making pulp chips and various kinds of board.

Skidding, clearing, stacking lumber, building roads . . .

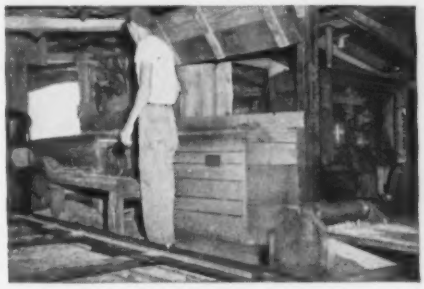
International® Power GETS MORE WORK DONE

From Texas, Maryland, New England, the Midwest . . . all across the country come these enthusiastic reports from loggers showing how International Equipment boosts production and lowers costs.

Boosts output 3,000 bf daily—"We do *everything* with our International Drott TD-6," reports George Dacier, Chelsea, Vermont. "It has increased mill production over 3,000 bd ft per day, without additional labor. Before getting it, our mill was idle 2 hrs while a 6-man crew loaded shipments. Now the TD-6 fork (and its one operator) loads 10,000 bf in 20 minutes and the mill continues to operate. Before it took us 3 hrs to stack lumber for drying. Now we stack as we cut and the TD-6 transports direct to the yard. This rig is the best investment we ever made!"

Clears 10 acres daily—One pass of V-shape cutter on their TD-18A, and trees 12 inches in diameter are cut off at ground level, reports Huddleston Construction Co., Bogota, Texas. For clearing larger trees up to 3 ft in diameter, operator cuts sides of trunk, then uses stinger beam to push tree over. Rig burns 60 gal of diesel fuel, clears 10 acres of river-bottom land per 10-hour day.

Builds roads to log 5,000,000 bf—When Erickson Hardwoods, Inc., Onalaska, Wisconsin, contracts with farmers to log out wood lots, they send this TD-9 to build truck haul roads. "This rig," states Operator Bill Kohlwey, "has as much power in 2nd gear as our old tractor had in 1st." Last year, it built roads to haul out 5 million board feet, 95% of it oak, subsequently cut for railroad ties, furniture, flooring, and house trim.



17 gal. of fuel produces 7,000 bf—At Enfield, New Hampshire, Lakeside Lumber Co. powers a 52-inch saw and 27-inch blower fan with their 76 hp International UD-14A diesel. "This engine has produced over 2,000,000 bd ft of lumber with the greatest possible economy," reports Co-Owner R. R. Reney. "A day's cutting of 7,000 bf requires only 17 gal of 14.3¢ diesel fuel. About 1½ qts of 21¢ oil are needed between 120-hour changes, and, in 3 yrs, we've had to make only normal maintenance repairs."

Works fast, transports easily—In spare time, Leslie Lauer, Eldora, Iowa, contracts his TD-9 to farmers for skidding timber from wood lots. "The TD-9 is ideal for custom work like this," says Owner-Operator Lauer. "It works fast and, because of its short length, you can take it from job to job on an ordinary truck where other crawlers of its class wouldn't fit." Here, it skids oak and elm logs.

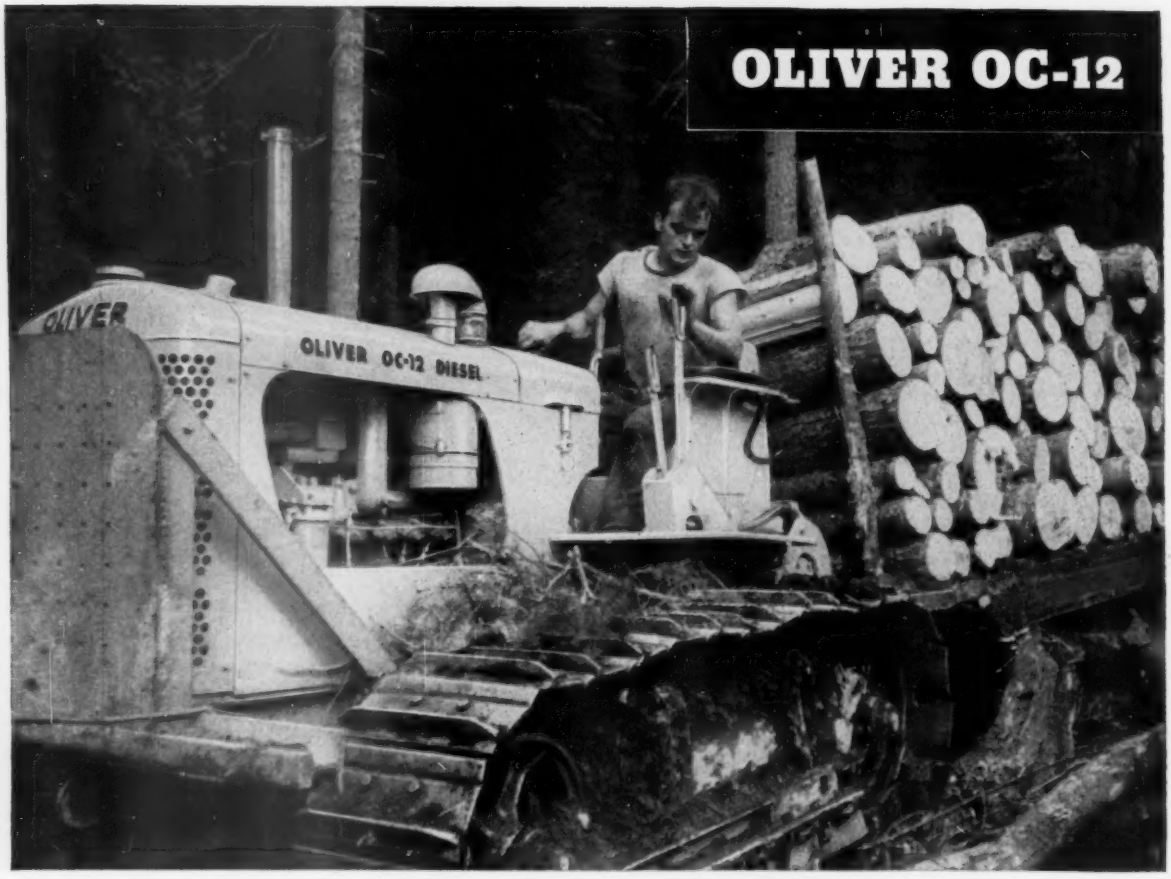
34 dhp skids 600 log feet—On only 7 gal of 13.7¢ diesel fuel, this 34 dhp International TD-6 skids 8,000 bd ft per 8 hour day. Loads average 600 bd ft each, are 80% pine. Owner-operator J. G. Burton, Cambridge, Maryland, says the TD-6 "Stands up under all terrain conditions. It gives no mechanical trouble . . . works day in and day out with real economy."

INTERNATIONAL HARVESTER

International Industrial Power

180 N. MICHIGAN AVENUE—CHICAGO 1, ILLINOIS

A COMPLETE POWER PACKAGE INCLUDING: Crawler, Wheel, and Pipe-Boom Tractors . . . Self-Propelled Scrapers and Bottom-Dumps . . . Tractor and Rubber-Tired Loaders . . . Diesel and Carbureted Engines . . . Farm Machinery . . . Motor Trucks.



Best logging tractor of its size... says owner of six OC-12's!

Smaller brother to the OC-12, yet loaded with power and performance for pulp work, is the compact OC-3. It's tops in its horsepower class for all pushing-pulling jobs.

Everett Bragdon of Dexter, Me., is working on an 18,000 cord contract for the leading paper mill in the Northeast. He knows how to get logs out of the woods in fastest time and at lowest cost.

The tractor that fills his bill best is the Oliver OC-12—he now owns six of these top-profit crawlers. That's because it's the best logging tractor of its size—packaging more drawbar horsepower... offering greater clearance than competition...requiring less maintenance...and delivering lower operating cost. Hauling sleds handling five cords of 4′ logs, Oliver's high clearance and high torque power cut down on time-wasting zigzags around stumps, rocks and mud—for swifter, straighter-line hauls...more trips per day.

Mighty important, too, is the exclusive steering arrangement which keeps power on both tracks at all times for *full-time* working power. The OC-12 is available with rear-mounted winch, hydraulic bulldozer, trailbuilder and hydraulic 1¼-yd. front loader—making it a versatile all-season, all-job machine. Choice of gasoline or diesel power with 53 d.b.h.p.

Prove to yourself that the OC-12 has all the ideal features for your logging operation. See your Oliver Industrial Distributor for a demonstration.

THE OLIVER CORPORATION

400 West Madison Street, Chicago 6, Illinois

OLIVER

a complete line of industrial wheel and crawler tractors and matched allied equipment

New Process Barks Alder

"Cinderella" wood species of Far West poses some new problems. Flotation may make debarking more efficient.

By BROR L. GRONDAL
Prof. of Forest Products, College of Forestry, Univ. of Washington

● Use of alder (Alnus rubra Bong.) as pulpwood is increasing in the Pacific Northwest. In most instances it is reduced to pulp by the kraft process. In chipping, usually no attempt is made to remove the relatively thin bark. It is too smooth-surfaced and adherent for successful removal by hydraulic means, and due to the irregular surface presented by logs, mechanical methods remove large amounts of wood fiber and leave bark patches in depressions.

In chipping alder without removing the bark, considerable bark is reduced to fragments that separate from chips in the usual screening process. During the subsequent cooking process, the bark that remains is rather completely cooked away, yielding very little pulp of acceptable quality. This means the use of additional cooking liquor and, in effect, decreased digester capacity, which may at times rise to as much as 5%.

When chips are reduced to pulp by the sulfite process, most bark must first be removed, as it will not "cook away" as in kraft. At the Institute of Forest Products of the State of Washington, University of Washington, Dr. Donald H. Clark obtained about ½ unit of alder chips cut from alder logs from which the bark had not been removed, from Scott Paper Co. (Coos Bay Pulp Corp.), Anacortes, Wash. He brought these to the writer, and asked if some simple method could be devised to separate bark particles from chips. As a consequence, a flotation process was developed:

CHIPS FLOAT—BARK SINKS—Fresh green chips from winter-cut alder will float, while bark particles sink in water. Chips with a large amount of adhering bark will sink, while larger chips with a small amount of bark will float. Experiment showed that while the actual amount of bark in chips was 9.3% by volume, 6.3% could be readily removed by flotation. With pre-treatment of chips by screening, and possibly with an adaptation of the "Ro-Ball" screen, it is probable complete removable of bark could be effected. The shorter the chip, the higher the percentage of bark removal.

Such schemes as rolling chips between rubber faced rollers (one of slightly greater diameter than the other to produce a differential slippage between chips when fed between the rollers), may also remove last vestiges of bark, when followed by flotation.

Figure No. 1 shows bark separated from chips by flotation. Note that fines, which normally adhere to chips and which consume much cooking liquor, have been washed away. Bark, 86.6 cu. in. in volume, was separated from 1,386 cu. in. of chips and bark. Figure No. 2 shows clean chips after bark removal by flotation, a small random sample.

SEASONAL VARIATIONS IMPORTANT—Tests must determine possible variations in the specific gravities of bark and spring wood at different seasons. Composition of water-solutions held by the bark and the springwood may be expected to show seasonal variations. Figure No. 3 shows a section of bark and the manner in which

Alder Mechanically Debarked

Eds. note—Much alder is being mechanically barked and successfully used in the Far West, often combined with other wood species.

Several mills are using it. It has created a new income for independent woodlot farmers in the Far West. Alder is a relative of the aspen and poplar of the Midwest and East. It has qualities many pulp and paper men didn't suspect, but now are eager to have in furnish.

Scott Paper Co. mechanically debarks alder at Anacortes, Wash., and produces a very satisfactory bleached sulfite pulp from it.

How Weyerhaeuser mechanically debarks alder at Longview for board products was described in PULP & PAPER, Jan. 1956.

While mechanical debarking is successful, the author's flotation bark removal system will be of interest, too, among many users or possible future users of bark.

FIG. 1—BARK PARTICLE SEPARATED FROM CHIPS BY FLOTATION. Note high percentage of fine material washed away.

FIG. 2—HOW ALDER CHIPS LOOK AFTER BARK IS SEPARATED BY FLOTATION.

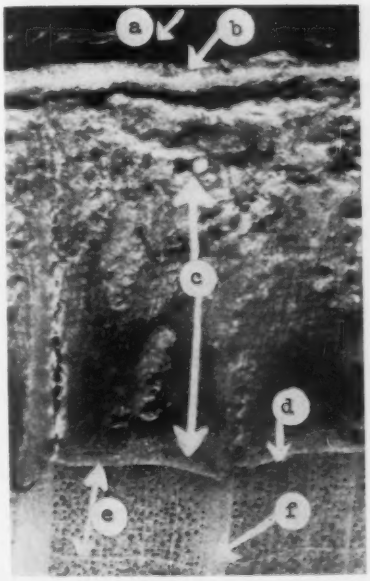


FIG. 3—ALDER BARK AND WOOD—ENLARGED TEN TIMES. a—Outer bark. b—Bark cambium. c—Phloem tissue. d—True cambium in winder condition. e—One annual ring of wood. f—An aggregate wood ray. Narrow wood rays are hard to see even at this magnification. When bark is removed it splits away at "a"

it is attached to springwood. Note that a very narrow layer of cells, in the cambial zone, separates bark from the springwood of the last annual ring of wood. When the tree begins to grow in the spring, one layer of cells in this zone becomes very mucilagenous, and cells divide into halves. At this stage, the cambium is protected from injury only by the hard bark and phloem tissue. If a log is chipped while the cambium is active, the bark will separate readily, and as cells in the phloem tissue are turgid with a sugary solution of sap, the bark will sink in water quickly. Chip-breaker pins on the back of the chipper disc will break bark away from chips very readily.

PROPOSED FLOTATION TANK—To make flotation practical, a device to move chips along after first immersing them completely in water will be needed. Figure No. 4 is a sketch of such a proposed tank. The rotating drum (b) is made of a perforated steel cylinder, provided with steel vanes attached to its surface. As it rotates, it carries the chips and bark well under the surface. Chips come to the surface. Bark goes to the bottom. Periodically, valves in the bottom of the tank open to discharge bark particles onto a conveyer chain.

The tank should be deep enough to permit the bark to sink in relatively undisturbed water. Under normal circumstances, shower water consumption should be moderate.

The cost of operating the flotation apparatus might be worth-while even if the bark has been removed by mechanical means from the logs before chipping, for the percentage of liquor-consuming fines in such chips is surprisingly high.

Build Forest Genetics Center at Rhinelander

Studies in tree improvement will be carried on throughout Wisconsin, Michigan, and Minnesota from a new forest genetics center, to be established near Rhinelander, by the Lake States Forest Experiment Station of St. Paul, Minn.

Land has been cleared and building plans drawn. Construction will begin early this year near the Hugo Sauer Nursery. The initial structure will include a greenhouse, potting and grafting room, laboratory, work shop, cold storage room, pollen extraction chamber, and fireproof storage and office space.

Most urgent present need is to develop guides for identification of superior trees from which seed can be collected. An ever-increasing amount of land has been planted in the Lake States, but more than 10 million acres of deforested or brushy areas remain.

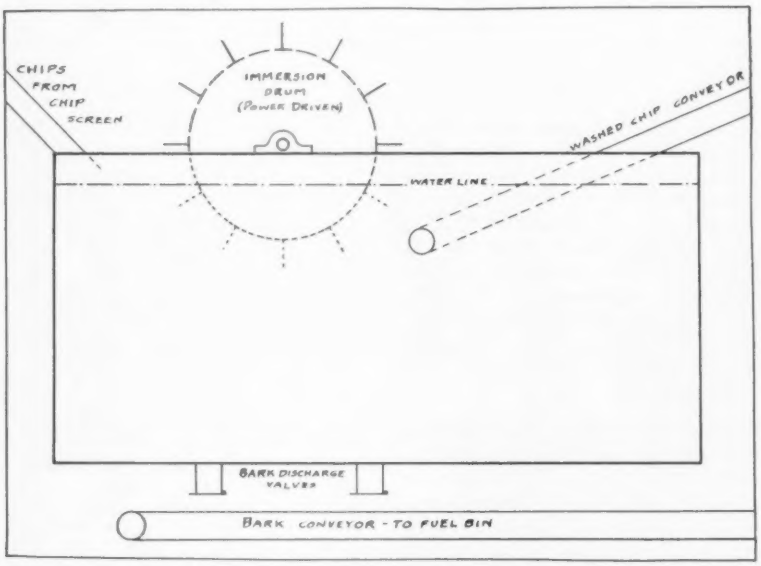


FIG. 4—IT IS IMPORTANT TO MOVE CHIPS ALONG AFTER IMMERSING THEM. Here's a proposed flotation tank that does it. More than one immersion drum can be used, to increase capacity. A submerged belt may be substituted for the drum.

Oxford Establishes Tree Farm "Family"

Oxford Paper Co. has established a Tree Farm "Family" program.

Harry L. Beach, general manager of the Wood Dept., said this is the first Farm Family program in West Central Maine and the third in Northeast United States. The "Family" was started in the South in 1945.

A "Family" consists of an informal group of certified Tree Farmers and potential Tree Farmers owning forest land who, through their interest in improving forest conditions, receive free of charge technical advice and guidance from professional foresters of the sponsoring company. The Oxford program is under immediate supervision of J. L. Hartranft, chief forester.

Progress Made in Control Of Pine Blister Rust Disease

The blister rust disease which attacks white pines (5-needled pines) has been checked on 17 million acres of the 23.3 million needing control, the U. S. Forest Service reports. It says 1.4 million acres received treatment during 1955 and 12.8 million wild currant and gooseberry bushes of the ribes family were destroyed. These plants transmit the disease from one pine to another. State and local agencies contributed $712,000 to the 1955 control program, an increase of $62,000 over 1954 contributions.

The disease is found in the Northeast, Lake States, northern Rocky Mountain States, and along the Pacific Coast. In the Rocky Mountain area, the battle is still in a "touch and go" status.

To Plant 1,586,000 Trees

Arrangements have been completed by Trees for Tomorrow, Inc., to distribute and machine plant 1,586,000 trees for 634 landowners in Wisconsin. Under the free tree phase of this reforestation program a supply of 550,000 seedlings and transplants was exhausted in a month's time in January.

Applications are filed by landowners for 1,000 free trees per year for two years. Tree blanks this year carried a forest management agreement on the reverse side. After the second year they are to encouraged to buy trees from state nurseries.

Planting stock comes from the industrial nurseries of Consolidated Water Power & Paper Co. and Nekoosa-Edwards Paper Co. Species are 3-0 Norway pine, 4-year-old white spruce transplants and 2-0 jack pine.

Free trees distributed since 1944 (including 1956) now total 7,100,000.

ANOTHER *LORAIN* RAKE GOES TO WORK!

Gantry-mounted Lorain Rake unloads cars in as little as 8 minutes each . . .

The Lorain Rake, mounted on a gantry, is fast becoming the economical, time-saving way to unload rack cars into flumes or conveyors at the mill. A typical installation is shown in the accompanying photos which were taken at a large southern mill. The principle of operation is quite simple, but highly efficient. The Lorain is mounted on a special gantry which travels on rails between two sidings. As strings of rack cars come in, the Rake simply swings to either side to drop a "board" behind the stacked pulpwood; then, with a pull toward the machine, it smoothly rakes the wood off the car into feeder conveyors which dump into the 375 ft. long main conveyor belt. Cars are not damaged . . . can be emptied and moved out of the yard quickly.

The gantry is propelled along the line of cars by a separate electric motor. The Lorain Rake is electrically operated. The gantry propelling mechanism, the feeders and the 375 ft. main conveyor belt are controlled from the operator's cab.

The Lorain Rake doesn't have to work at top speed to meet the capacity of the conveyor—which handles a car of pulpwood about every 15 minutes. A single car has actually been unloaded in as little as 8 minutes.

This specialized pulpwood "unloader" is another example of Lorain engineering to meet the needs of the pulpwood industry. Thew-Lorain builds various sizes of Rakes that can be mounted on crawlers, rubber-tire carriers or special gantry mountings. Thew-Lorain also builds a full line of crawler and rubber-tire mounted pulpwood handling cranes.

Whatever your pulpwood handling need, you will find your Thew-Lorain Distributor better equipped to solve your problem most economically!

● **THIS SOUTHERN MILL . . .** *is typical of the paper mills which have adopted the Lorain Rake principle for high speed, low cost unloading of rack cars. Lorain works closely with mills to properly apply Lorain Rakes to each individual need.*

GAIN THESE ADVANTAGES

Excellent visibility, positive and precise control of spotting the board, completely clean cars, reduced spillage, no damage to cars–these are operating advantages this owner enjoys with the Lorain Rake.

OTHER LORAIN RAKE USERS

- Bowater Southern Paper Corp., Calhoun, Tenn.
- East Texas Pulp & Paper Co., Evadale, Texas
- International Paper Co., Georgetown, S. C.
- Union Bag & Paper Corp., Savannah, Ga.

THE THEW SHOVEL CO., LORAIN, OHIO

THEW LORAIN®

In Italy—Amazing Wood Yield per Acre

● A remarkably high yield of poplar —now one of the favored pulpwood species in America as well as Europe —has been achieved by foresters in the broad, rich Po Valley of Italy.

This fact is confirmed in a letter to PULP & PAPER by Alexander Koroleff, consultant to Pulp and Paper Research Institute of Canada.

A yield of five to seven cords per acre of hybrid poplar has been produced in Italy. A prominent Southern pulpwood production manager says this is a record which far surpasses anything done in this country, and should be studied.

This is an amazing figure, at a time when the Southern United States forest industry leaders are confidently talking of doubling, but only doubling, their present growth. In America, one, two or three cords yield per acre is considered good—at the present time. This applies to hardwoods, and species similar to the poplar in Italy, such as aspen in the Lake States, alder in the Far West, etc., which are being increasingly used for paper and paperwood products.

"The production of about 500 cu. ft. of wood per year per acre in Italy is not unusual," writes Mr. Koroleff. "This is true, even though usually no more than 200 trees are planted per acre. And, in addition, valuable agricultural crops are harvested between the trees for several years after planting."

For more information on the Italian production, he refers to a portion of his bulletin, "Full-Tree Logging—a Challenge to Research," issued by Pulp & Paper Research Institute, pp. 63-64.

In the Pulpwood World

JOHN HANSON, formerly with Michigan State Conservation Dept., has joined Watervliet Paper Co. as director of its expanding wood procurement program, as a result of its addition of a hardwoods semi-chemical pulp mill. . . . **JAMES C. LAMY,** Michigan Dept. of Conservation forester, has joined Abitibi Power & Paper as forester for its new projected North Michigan hardboard mill. . . . **CHARLES S. COWAN,** of Seattle, has retired as secretary-treasurer of the Washington State Forestry Conference, a position he held for 28 years, serving as a key figure in forest legislation and fire protection matters. . . . **GILMORE BYERS MACDONALD,** former head of Iowa State College's forestry dept., has received a distinguished service award from the American Forestry Assn. . . .

KIRK SUTLIVE, public and community relations manager for Union Bag

SUMNER
Chippers
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Big, Small or In Between
SUMNER has the distinction of building the largest and the smallest as well as the widest range of chippers, including all accessories . . . regardless of size, output or other woodroom requirements.
BARKERS — CHIPPERS — SCREENS
WOOD HANDLING AND LOG BREAKDOWN MACHINERY
Make Sumner Your Headquarters For Woodroom Machinery
Designers and Builders of Quality Machinery for the Forest Products Industries
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& Paper, as chairman of the Keep Georgia Green Committee, sponsored by the Georgia Forestry Association, presided at a state-wide meeting on fire prevention. . . . **RAYMOND H. WHITNEY** has been appointed Southeastern district manager for Morse Chain Co. He will be headquartered at Charlotte, N.C.

PETER S. GREENWOOD, former chief forester for West Tacoma Newsprint Co., Steilacoom, Wash., is heading for Juneau, Alaska, to become manager of the timber division of Columbia Lumber Co. Pete was at West Tacoma nine years. His predecessor at WTN, **DOUG WELCH,** now works for Georgia-Pacific with planning a pulp or paper mill at Juneau. . . .

Attending Yale Forestry School's second industrial forestry seminar sessions were **JAMES B. CARLAW,** technical assistant to the manager, department of woodlands, International Paper Co., New York; **FELIX DOWDY,** division forester for the Southern Kraft Div., International Paper, Mobile, Ala.; **WALTER H. HOFFMAN,** staff forester, Champion Paper & Fibre Co., Hamilton, O.; **S. G. KEEDWELL,** Consulting Forester, Emporia, Va.; **E. F. O'HARA,** vice pres. and assistant secretary, Armstrong Forest Co., Johnsonburg, Pa.; **CLARENCE RICHEN,** chief forester, Crown Zellerbach Corp.; **JOHN W. THOMPSON,** forester, Johns-Manville Products Corp., Natchez, Miss.; and **PAUL N. VANCE,** forester and wood supply mgr., Fir-Tex Insulating Board, Inc., St. Helens, Ore. . . .

J. A. MICHAUD has been elected vice president in charge of woodlands for Consolidated Paper Corp., according to announcement by President **G. M. HOBART.** He was general woods manager and now replaces **FRANCOIS FAURE,** who retires after 51 years' service. . . .

CARLOS T. BROWN is the new Forest Service supervisor at Ketchikan, Alaska. Timber cutting for Ketchikan Pulp Co. will fall under his jurisdiction. . . . he's a graduate of OSC '33 . . . he replaces **CHESTER ARCHBOLD,** now of Juneau, new chief of the mining claims section under Regional Forester **ART GREELEY.** "Arch" has been at Ketchikan since 1931, in Alaska since 1926.

Appointment of **JOHN D. WARNER** to the new position of woods manager for the Trenton, Ont. mill of Hinde & Dauch Paper Co., of Canada, is announced by **WILLIAM H. PALM,** president. Mr. Warner will be responsible for wood for the Trenton paperboard mill, now in the process of being converted from the use of cereal straws to woodpulp. He served as field representative for West Virginia Pulp & Paper Company's Mechanicville, N. Y. mill and is a graduate of Cornell. . . .

ED P. STAMM, Crown Zellerbach vice president and logging mgr., is chairman and director of the Keep Oregon Green campaign.

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FERROUS AND NON-FERROUS CENTRIFUGAL CASTINGS FOR ROLL SHELLS, COVERS, AND LINERS.....

Our continuing development program is a major factor in meeting your ever increasing demands for ferrous and non-ferrous centrifugal castings. And research is a vital phase in keeping ahead of your requirements.

Precise metallurgical control is maintained throughout the entire manufacturing process to produce strong, uniform, close-grained castings which are extremely resistant to heat, corrosion, and abrasion. Excellent machining facilities for turning, boring, and drilling are also available.

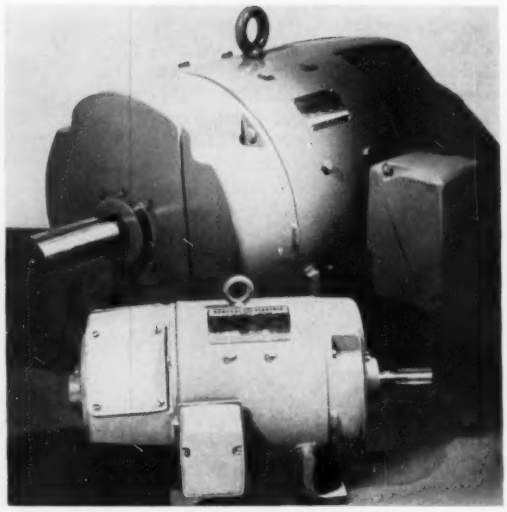
You can rely on Chief Sandusky as a versatile integrated centrifugal specialist where castings are produced to your specific requirements with modern, up-to-date equipment.

Chief SANDUSKY CENTRIFUGAL CASTINGS

FERROUS AND NON-FERROUS

SANDUSKY FOUNDRY AND MACHINE CO., Sandusky, Ohio

G-E Unveils Entirely New Motor Line



NEW LINE OF KINAMATIC D-C MOTORS recently unveiled by General Electric Co., designed for faster, more continuous, and more automatic production.

● At press conferences in Chicago, New York and San Francisco, General Electric Co. announced a completely new Kinamatic (trade mark) line of direct current motors and generators.

They are designed to meet needs for faster, more continuous and more automatic production. They are more compact and are available for 1 to 150 hp motors and ¾ to 100 kilowatt generators.

Use of direct current motors and generators in pulp and paper processes has increased greatly in recent years because of adjustable speed characteristics and precise controls. This new line of d-c motors and generators, therefore, is expected to play a significant role in pulp and paper mills.

The Kinamatic line is the first complete line of industrial d-c motors and generators built to the latest NEMA standards for future design.

Paul D. Ross, marketing manager of G-E's Direct Current Motor and Generator Department, Erie, Pa., told the Chicago conference, which PULP & PAPER covered, that Kinamatic motors have been designed for exceptional versatility and may be used in either constant or adjustable speed applications. He said speed may be adjusted by armature voltage, or field strength control, or any combination of both. New higher base speeds are available. For constant hp applications, higher top speeds can be obtained through field strength adjustment.

The Kinamatic motor can be applied where extra power at high speeds is needed. Through "forcing"—the application of over-voltage—many ratings can operate at proportionately higher speeds and horsepower.

M. A. Baker, manager of G-E's small d-c motor and generator engineering, explained that faster speed of response is made possible by a significant reduction in armature inertion (Wk^2) and electrical time constant permitting split-second response for stops, starts, reversals and speed changes.

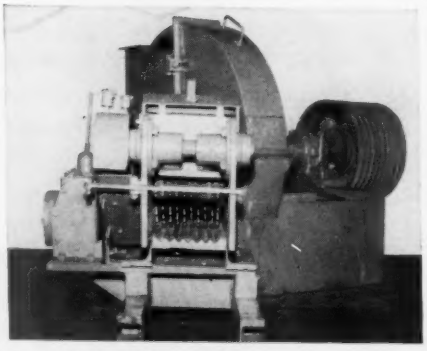
Motor life at higher speeds is supported by full Class B insulation, a high volume fan and improved air flow. These enable G-E to guarantee a 15% service factor in all standard dripproof Kinamatic motors.

Convert Logs into HIGH-QUALITY CHIPS

with Carthage Log Barkers, Log Splitters, Log Chippers, Slab Chippers, Chip Screens

For Example:

CARTHAGE SLAB CHIPPER converts slabs, edgings and rounds into top quality chips. Low sawdust except bark. Horizontal feed facilitates handling long pieces. Positive mechanical feed assures uniform, high-quality chips. Heavy-duty construction with all parts accessible for easy maintenance.



Write for Complete Information

CARTHAGE MACHINE COMPANY CARTHAGE, NEW YORK

West Coast: Ray Smythe, 501 Park Bldg., Portland 5, Ore.

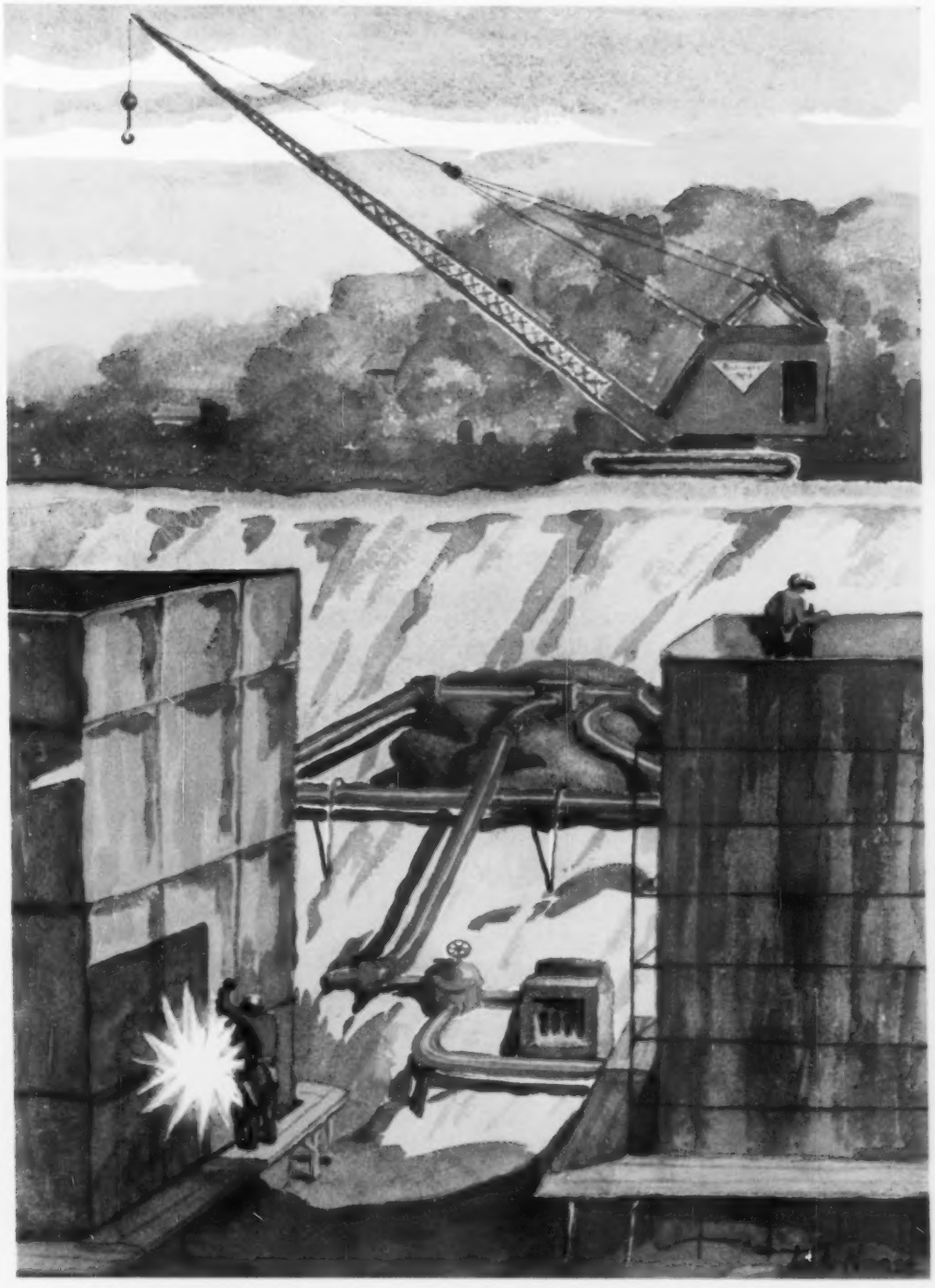
American Potash To End Agreement with Meyer Firm

Peter Colefax, president of American Potash & Chemical Corp., and Wilson Meyer, president of Wilson & Geo. Meyer & Co., announce that a mutually agreeable decision to end the arrangement under which Meyer has represented American Potash in sale of Trona soda ash, salt cake, etc., in various western sales areas upon expiration of their agreement in mid-1956.

Expansion of American Potash in manufacturing and added responsibilities of Meyer in distribution have resulted in divergent interests.

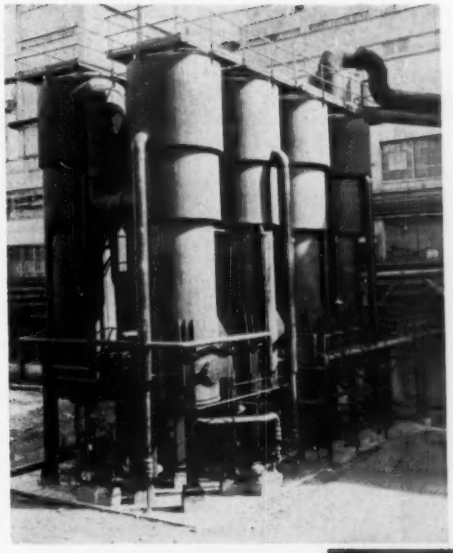
Chandler Plans New Activities in Industry

John B. Chandler, 1735 Oceanfront, Atlantic Beach, Fla., phone: 5-4580, announces his resignation from the Hank D. Jones Co., effective Dec. 21, 1955. At the present time, he is making plans for his continued service to this industry. He formerly was with an instrument company, later with Buffalo Forge, and represented other firms, covering mills from East to West Coast.

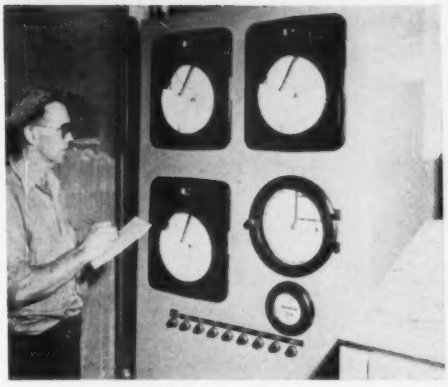


WATER COLOR PAINTING BY L. J. A. NEESE

THE FOUNDRY IS EXPANDING at Beloit Iron Works, Beloit, Wisconsin, where steel workers, shown above, are completing the assembly of the huge dryer and roll casting pits, 25 feet below the level of Rock River. Pumps and well points shown in the background control river seepage during construction. This expansion, to be completed during 1956, will provide 100,000 square feet of foundry facilities at Beloit, including a new dryer and roll casting floor, and a new core room.



EFFICIENCY AND PRODUCTION CAPACITY INCREASED at Crown Zellerbach Camas, Wash. kraft mill with new septuple-effect outdoor evaporator manufactured by Swenson Div. of The Whiting Corp.



WHERE OPERATION IS CONTROLLED. Operator DEL FITZGERALD observing Foxboro liquor flow recorder-controller, Foxboro steam pressure recorder-controller and Republic steam flow recorder and integrator for No. 2 black liquor evaporator at Camas.

How New Evaporator Works on West Coast

● In replacing one of two sets of evaporators in the kraft recovery system at Crown Zellerbach Corp. mill at Camas, Wash., a modern septuple-effect unit of 75% greater capacity and nearly 80% greater efficiency has been installed. This new unit, a Swenson capable of handling liquor from 350 tons of kraft pulp daily, replaces a horizontal-tube quadruple-effect evaporator built for 200 tons daily production, which had been in operation about 30 years.

This new unit has integral heaters in five of seven bodies for more positive heat transfer and for smoothing out minor fluctuations, according to Kraft Mill Supt. L. D. McGlothlin. Through a split feed arrangement around 60% of the black liquor enters the evaporator at the sixth effect and 40% at fifth effect. From No. 6, the flow is to No. 7 and there combines with flow to No. 5. From there on it is a "backward feed" unit. The former unit evaporated 3½ lbs. of water with 1 lb. of steam. The new one evaporates 5.7 lbs. water per lb. of steam and the other set, a sextuple-effect evaporator operating in conjunction with the kraft mill, averages about 4.5 lbs. water per lb. of steam.

The new unit was erected by L. H. Hoffman, Portland, Ore. as an outdoor installation. Exposed surfaces are insulated with 1⅛-in. magnesia block.

Expansion Delayed by Westinghouse Strike

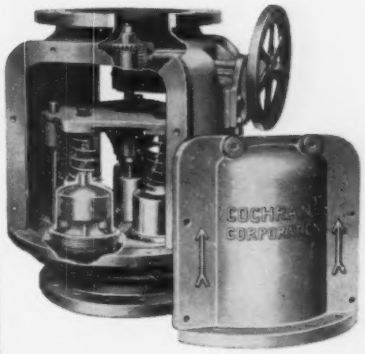
Pulp and paper industry expansion in several locales has been delayed by strikes at 40 Westinghouse Electric Corp. plants. Income loss to Westinghouse through most of the fourth quarter in 1955 amounted to $1,037,000 or 9 cents a share, Chairman and President Gwilym A. Price reported.

More than 65,000 employes, a great part of the Westinghouse organization, have been working effectively since the strike began on Oct. 17 in 30 plants, including 5,000 who crossed picket lines. Some 65 plants were unaffected.

Cochrane

MULTIPORT RELIEF VALVES

FOR STEAM • AIR • GAS SERVICE



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- MAXIMUM SAFETY
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- NO STICKING
- NO FREEZING

Cochrane Multiport Valves provide a system over-pressure regulation that can be relied on. As pressure rises above set pressure, multiple valves ease open and *meter off* the over-pressure. They then gently close to the pre-set pressure, automatically.

Adjustment from zero to required pressure is easily accomplished by hand wheel or chain wheel. Applications are as Atmospheric Relief Valves, Differential Pressure Spill-over Valves for closed systems, Check Valves or as Vacuum Breakers.

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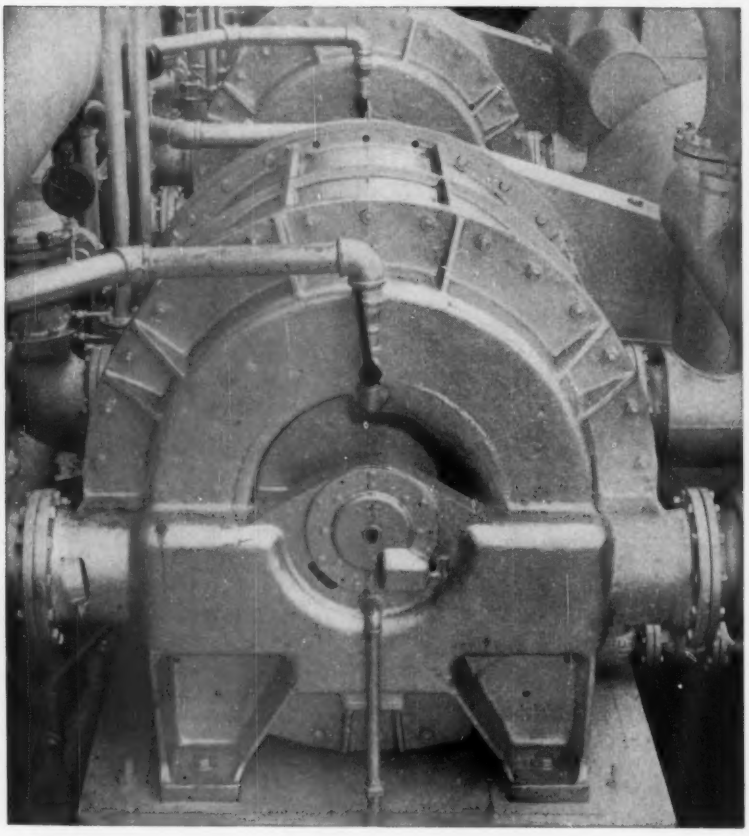
High machine speeds?
High temperature headbox stock?
You need NASH Vacuum Pumps!



Air from the suction rolls on paper machines carries with it substantial quantities of moisture. This considerably reduces the effective air handling capacity of any vacuum pump except the Nash. In the Nash Vacuum Pump, because of the unique principle of operation, the bulk of this vapor is effectively condensed inside the pump. The total capacity of a Nash is therefore increased.

When you specify a Nash Pump it can be closely sized to the job. It is not necessary to select an over-sized unit, because the rated capacity of the Nash may be relied upon.

That is one of the reasons why Nash Vacuum Pumps are installed in over a thousand leading Paper Mills. An engineer from Nash will be glad to survey your mill, and make recommendations, entirely without obligation to you.

NASH ENGINEERING COMPANY

441 WILSON ROAD, SO. NORWALK, CONN.

Aquavac Increases Drying Capacity

JACK MAZER, Chairman of the Board, Hudson P&P, inventor of Aquavac, new device for increasing drying capacity.

A device, Aquavac, to increase drying capacity and speed up paper machines has been invented by engineer-trained Jack Mazer, chairman of the board, Hudson Pulp & Paper Corp.

The first Aquavac installation, designed for the suction couch roll for a machine at Hudson's Bellows Falls, Vt. mill, was followed by others at the flat boxes on the wire and felt. Results were immediately successful. Subsequent installations on various machines running paper grades ranging from 5 lbs. on wire to over 500 lbs. on a Kamyr machine, were equally successful, reports Mr. Mazer.

Mr. Mazer's development involves application of a steam discharge over suction boxes and other suction zones and enclosed to prevent entrance of air into these zones. Steam passing through the pulp web creates an additional, independent vacuum by virtue of steam condensation and increases drainage qualities because of the higher temperature of the stock.

The Bellows Falls installation resulted in an increased vacuum in the suction box and a drop in steam requirements for drying as shown by a lower steam dryer pressure. Resultant advantages were a higher stock temperature and a higher percentage of water removal which increased the fiber content entering the presses by 15% to 20%.

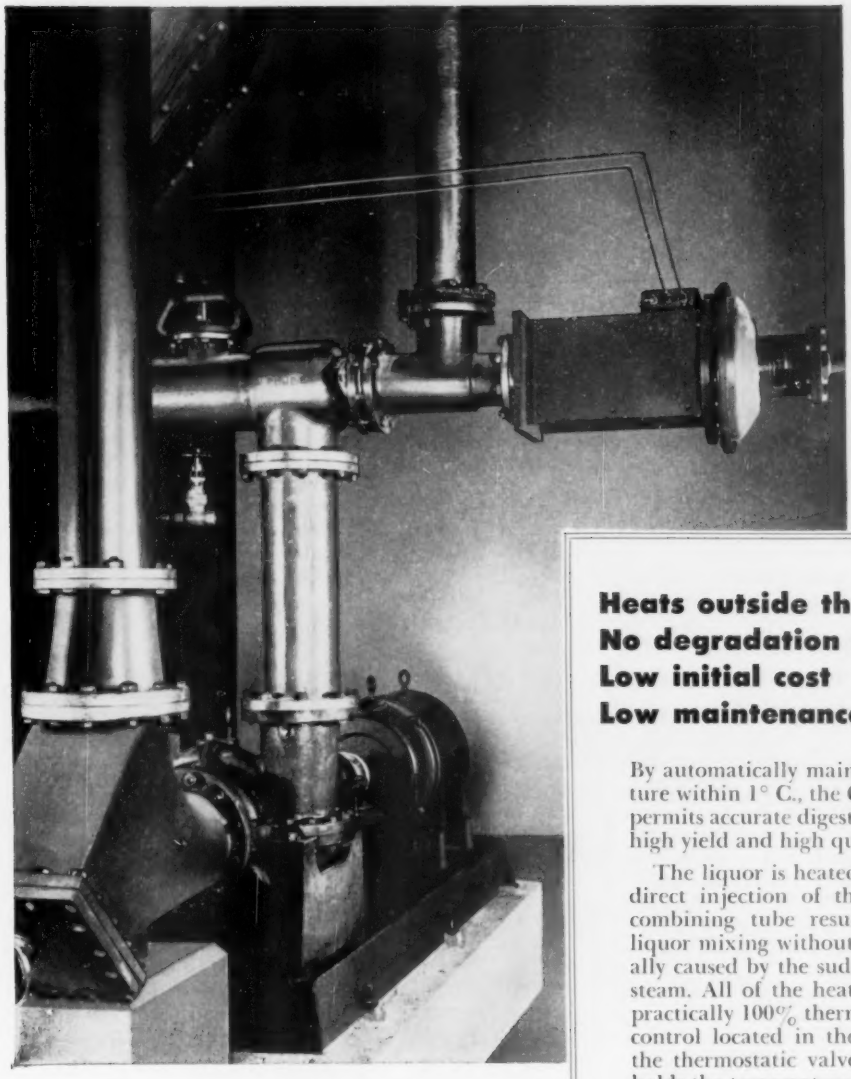
A patent was granted in 1955.

Resultant economies were obvious, says Mr. Mazer. Steam savings on the dryers, based on steam cost of 75¢/M lbs., ranged from $1 to more than $2 per ton of paper and profit on increased tonnage was many times more, he says.

An important factor to consider, stresses Mr. Mazer, is that by virtue of the increased drying capacity, speed and paper machine production can be increased proportionately.

Inquiries may be sent to J. Mazer Dehydrator Co., Box 174, Purchase, N.Y.

Assure Higher Yield of More Uniform Pulp with the **Chemipulp HYDROHEATER**



Hydroheater installed in horizontal position, with steam inlet at top and liquor inlet at bottom. Air actuated thermostatic valve shown at right. Combining tube adjustment at top left.

Heats outside the digester
No degradation of fibre
Low initial cost
Low maintenance cost

By automatically maintaining liquor temperature within 1° C., the Chemipulp Hydroheater permits accurate digester control that results in high yield and high quality.

The liquor is heated outside the digester by direct injection of the steam. An ingenious combining tube results in thorough steam-liquor mixing without the excessive noise usually caused by the sudden condensation of the steam. All of the heat in the steam is used — practically 100% thermal efficiency. A sensitive control located in the digester inlet operates the thermostatic valve in the steam line and holds the temperature within 1°C.

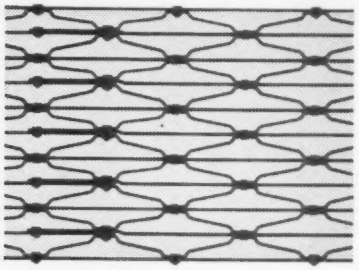
Compact in design, the Hydroheater actually becomes part of the piping system and can therefore be used in a wide range of locations and positions.

Chemipulp Process, Inc.
Woolworth Bldg. Watertown, N. Y.

Associated with Chemipulp Process Ltd., 403 Crescent Bldg., Montreal, P. Q.

Pacific Coast Representative, A. H. Lundberg, 308 Orpheum Bldg., Seattle 1, Wash.

MANY-PURPOSE
FLOORING
FOR PAPER MILLS
★
IRVING GRATING



In every step from log to paper you're on sure footing with IRVING open-grid steel and aluminum flooring.

IDEAL FOR

Walkways
Heavy-duty, cement-filled armouring
Receiving and loading platforms
Catwalks
Stairways
Mezzanines
Flooring and platforms around machines, pipes, beaters, combiners, digesters

KNOWN FOR

- Safest walking and wheeling surface
- Strength, light weight, durability
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PLUS

More than 50 years of engineering and manufacturing experience.

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Custom-Built to Your Specifications
Prompt Delivery

IRVING SUBWAY GRATING CO., INC.
ESTABLISHED 1902

5096 27th St., Long Island City 1, N. Y.
1896 10th St., Oakland 20, California
Armco Drainage & Metal Products of Canada Ltd., P.O. Box 300, Guelph, Ontario, Canada

13th Is Lucky Day! Now 1,200,000 Safe Days

On 13th of January (Friday!) Longview Fibre Co. employes at Longview, Wash., completed 100 continuous injury-free days and 1,000,000 safe man-hours employment.

The event was celebrated in various ways, including "wiring" coffee and soft-drink vending machines about the plant to dispense refreshments "on the house". At month's end the injury-free record had been increased to 1.2 million man-hours. Paper Mill Supt. W. W. Clarke heads the central safety committee.

Management Courses

Monday evening "Paper Mill Management" courses are a new special feature at Western Michigan College, Kalamazoo, Mich. They are held each Monday 7 to 9:15 p.m. to April 30, inclusive (except Apr. 2).

Research, production, purchasing, personnel and other management subjects are discussed by industry leaders in the Kalamazoo area. R. A. Diehm, associate professor of paper technology, is directing the course.

French Leader Dies

George Franck, head of Cartonneries de la Rochette, with board mills in both France and North Africa and a longtime leader of the French industry, was killed in an accident in France recently. About a year or two ago he visited Mexico with the idea of possibly building a mill there. He was a former vice president of l'A.T.I.P. (the French TAPPI).

William Brydges, retired Southern U. S. mill supt., of Lynchburg, Va., has done consulting work for Mr. Franck's company.

Tours by French "TAPPI"

In the past two years, l'A.T.I.P. (France's TAPPI) has organized "voyages d'etude" into first West Germany, and then, in Switzerland. About 100 members took part in the trip to study and visit Swiss mills.

Paper Sacks Save Government Money

Paper sacks are saving the U. S. government about $10,000 a year in Glacier National Park reports Supt. J. W. Emmert. Each automobile entering the national park is given a paper sack with a printed plea to help keep the park clean. Last year 120,000 sacks were given out in Glacier. The result: Maintenance man hours are used less for refuse pickups and more for improvements.

Coated Paper Technique Patented by Neenah Firm

To at least one surface of a base sheet of paper there is applied a mineral coating material containing a pigment and an adhesive comprising a latex emulsion of latex and a carbohydrate. Substantially all the particles of the latex in the emulsion are of a size in the range from about .2 to about .5 microns. The latex particles are disposed chiefly at the surface of the sheet.

Patentees: Paper Patents Co., 130 North Commercial St., Neenah, Wis. No. 737433.

Waldhof Patents Semi-Chemical Pulp Process

A cellulose-containing raw material is treated at a temperature from 100° C. to 152° C. with a bisulfite cooking solution containing 1.3 to 3.0 per cent of sulfite dioxide and a base, the pH at the beginning of the reaction being 3.0 to 6.2, for a period of time insufficient to obtain pure cellulose. Thereafter the product is mechanically subdivided into individual fibres.

Patentees: Zellstofffabrik Waldhof, Sandhoferstrasse 156, 17(a) Manheim-Waldhof, West Germany. No. 736300.

When plans call for . . .

ACID
STORAGE TANKS

custom fabricated on the WEST COAST

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Your "on the spot" source with over 55 years of experience in handling a wide variety of fabricating jobs involving steel plate and alloys up to 1" thickness.

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Formerly Puget Sound Sheet Metal Works
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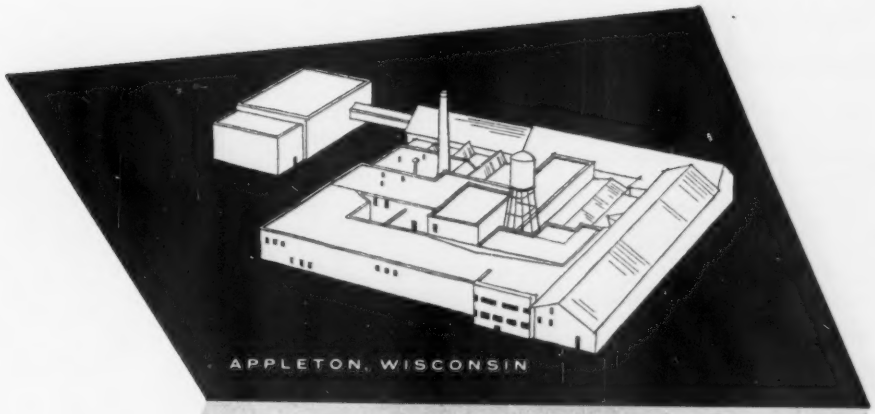
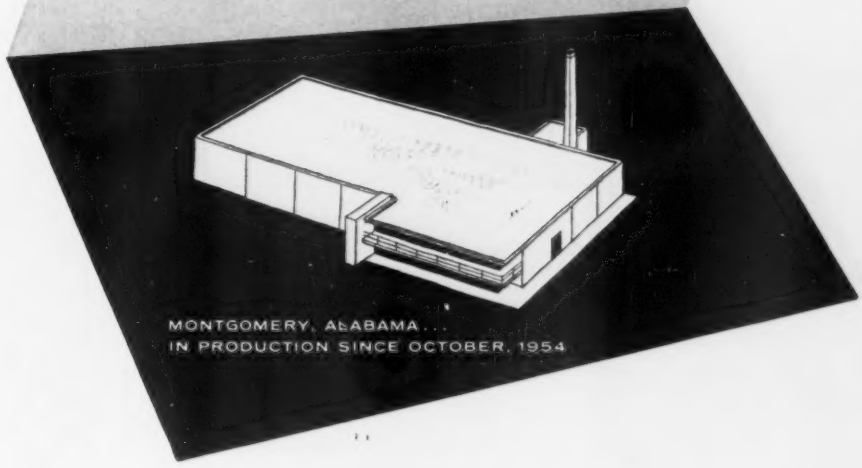


Confidence....in the paper industry

Foresight..... to anticipate changing conditions and requirements of the paper industry with new manufacturing facilities



Appleton Wires are Good Wires

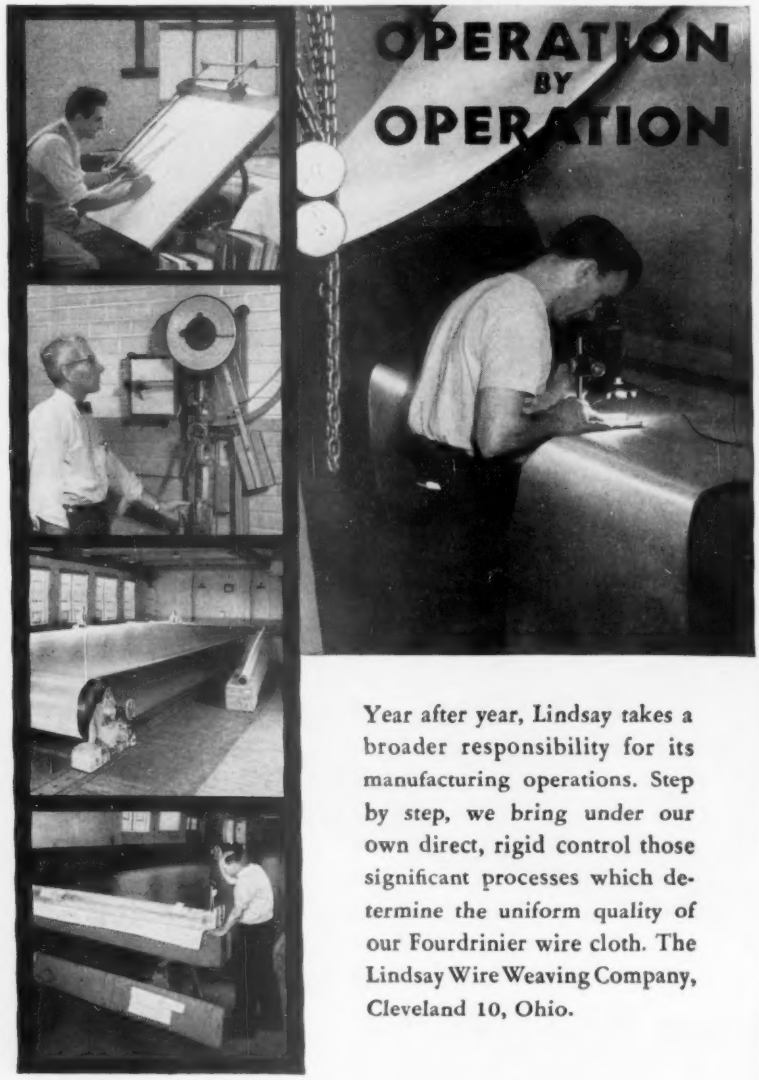
Appleton Wire Works, Inc.
GENERAL OFFICES, APPLETON, WISCONSIN

INTERNATIONAL WIRE WORKS, MENASHA, WISCONSIN . . . AN AFFILIATED COMPANY SINCE JANUARY, 1955

PULP & PAPER NEWS FROM CANADA

B.C. MILLS WARN GOVERNMENT OF INSECURITY–NOTES FAST-GROWING SOUTHERN U.S. INDUSTRY–Although $200,000,000 has been spent on British Columbia mills since 1947 and $216,500,000 more will be invested in the next five years, vulnerability of the industry cannot be overlooked, according to a brief submitted by 9 operating companies to the Sloan Forestry Commission which is studying possible further plans for industry regulation.

The brief emphasizes that British Columbia faces competition from Eastern Canada, Scandinavia, Western U.S., and the dynamic pine region of the Southern states.



Year after year, Lindsay takes a broader responsibility for its manufacturing operations. Step by step, we bring under our own direct, rigid control those significant processes which determine the uniform quality of our Fourdrinier wire cloth. The Lindsay Wire Weaving Company, Cleveland 10, Ohio.

LINDSAY WIRES Since 1904

FOR PAPER MANUFACTURING

WHY SOUTH IS A THREAT–The brief contends it "is closer to our markets, pays lower transportation costs, lower logging charges with lower capital investment, and manages forest areas with more rapid growth rates on an easily accessible and workable territory."

The brief points out that recent economical pulping of hardwoods could gradually place British Columbia, and Canada as a whole, in the restricted category of producing only pulp of special qualities. And it continues:

"Newsprint, almost half of British Columbia's pulp and paper production, is expected to become more exclusively home-produced by the U.S. because of the new competitive position gained by the Southern newsprint manufacturers. The Southern states produce between 40 and 50% of total pulp of the U.S. Total production of newsprint exported to the U.S. from Canada decreased from 89% in 1950 to 81.8% in 1954. Much increased consumption in the U.S. has been met by the South."

The association said British Columbia must insure forest management legislation sufficiently flexible to allow the province to remain competitive. This, it said, can only be done by controlling costs and fixed commitments in buoyant as well as depressed periods.

MUST HAVE ASSURED TIMBER–"Large capital investments necessary for today's growing forest operations can only be justified if an assured timber source is available," states the brief.

Since 1937 the base wage rate in the industry in British Columbia has risen from 47½ cents per hour to $1.67. Weekly earnings of lowest paid employes rose from $22.80 to $66.80 in spite of elimination of a full working day from the work week.

Further statements will be filed later by most of the nine companies.

Sawmill residue, salvage logs and small wood recovered in 1955 amounted to 490,000,000 f.b.m. Seven years ago, there were no facilities for such recovery. This has reduced the mills' portion of total log cut to only 20%.

Market value of British Columbia's pulp and paper production in 1954 was $176,000,000, 53% sold in the U. S., 24% in Canada and 23% overseas.

MacMILLAN OPPOSES LICENSES IN MUCH OF B.C.–The present scramble for forest management licenses in British Columbia is due to the great demand for wood for pulp mills, and if it were not for legisla-

Industry Leaders in New Roles

AUSTIN P. STORY (left), newly elected Director of The Mead Corp., continues as Pres. of Chillicothe Paper Co., now merged with Mead. He was one of the founders of Chillicothe Paper, in 1919; has been Pres. 14 years. His company makes quality uncoated printing papers, offset and litho and largest line of embossed offset for greeting cards.

ROY J. SUND (right), newly elected Pres. of Marathon Corp. of Canada, Ltd., whose big pulp mill at Marathon, Ont., is part of the expanding Marathon organization. He succeeds John Stevens, Jr., who continues as Chairman of the Canadian subsidiary and was re-elected Pres. of Marathon Corp. Mr. Sund, a resident of Neenah, Wis., is also Exec. V.P. of Mfg. for all Marathon operations.

tion prohibiting export of raw material many mills would not have been built, H. R. MacMillan, recently retired chairman of the board, MacMillan & Bloedel, told the Sloan Forestry Commission. A controversial MacMillan recommendation to the commission was that no further licenses be granted in the district embracing Vancouver Island and lower mainland coast of the province. He pointed out the area as a whole was being seriously overcut, even though overcutting was prohibited in the established license areas and public working circles.

EXPANSION—Price Bros. & Co. will build a $10,000,000 power plant of over 50,000 hp at the mouth of the Shipshaw River in the northern section of Quebec. The Hearst publishing interests are continuing their negotiations with the Nova Scotia government with a view to building a $10,000,000 newsprint mill at Sheet Harbor, N.S., halfway between Halifax and Canso, and if they break down, Scott's interest may be diverted to Ontario. Points at issue are whether the government will build a power plant and make pulpwood available.

Rolland Paper Co. has been authorized to borrow up to $10,000,000 for an expansion program, including a new paper machine at the St. Jerome, Que., bond paper mill.

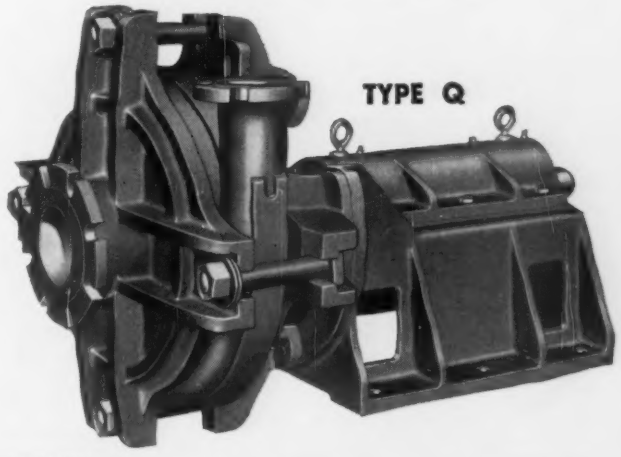
misfits cost money...

Coddling old pumps, "bargain" pumps or pumps that weren't engineered for the job can be an expensive proposition.

When misfits like this are put to work, they generally can handle only half the job they should. Often their "downtime" is greater than their operating time. And when pumps fail the greatest cost is not for repairs—but for lost production.

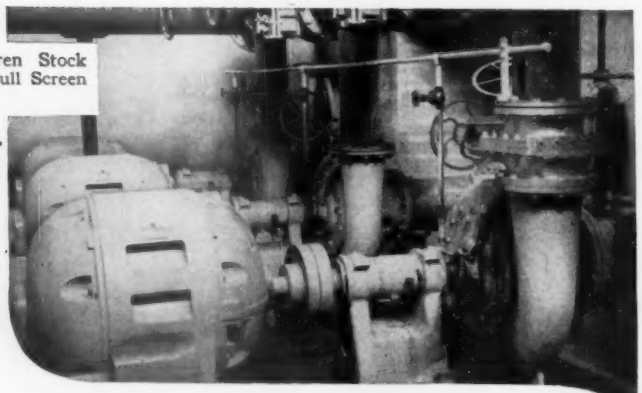
Start today by replacing "misfits" with new Morris pumps. For nearly a century Morris has been manufacturing a complete line of top quality pumps to meet the diversified requirements of industry. Every Morris pump has been specially designed and engineered to handle a specific job and to give you years of trouble-free service under the most rugged conditions.

Specify Morris when you want lasting pump value . . . it will save you money in the long run.



MORRIS
CENTRIFUGAL PUMPS

● **Free Service.** Morris Engineers will be glad to recommend the pump best suited to your needs for size, capacity, etc. Send necessary data today to Morris Machine Works, Baldwinsville, N. Y.



Three Warren Stock Pumps in Bull Screen Room

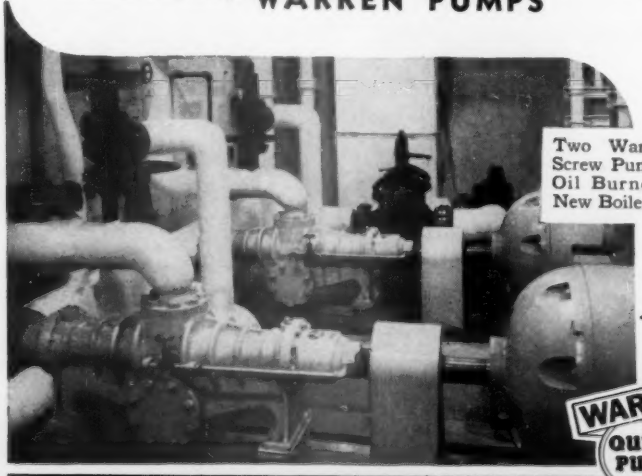
GREAT NORTHERN
a Great Name in Papermaking

and great things are happening in East Millinocket, Maine, where the recently expanded mill of Great Northern Paper Company has a present capacity of 1,000 tons of newsprint per day, making them the largest producers of newsprint in the United States.

Among the many additions in facilities is a Chemi-Groundwood Pulp Mill for processing hardwood, the first large-scale commercial plant of its kind.

Recent Warren Pump installations include Stock Pumps in Bull Screen Room, Pressure Pumps to Grinders, Chemi-Groundwood Decker Stock Pumps, Secondary Screen Accepted Stock Pumps; also Fuel Oil Transfer and Burner Pumps in new Boiler House. Other experience-rated Warren Pumps are serving at Great Northern's Millinocket and Madison mills.

For operating economy and long-range dependability, it is good business to specify: **WARREN PUMPS**



Two Warren-Quimby Screw Pumps on Fuel Oil Burner Service, New Boiler House

PPF-37

WARREN QUIMBY PUMPS

WARREN PUMPS

WARREN STEAM PUMP COMPANY, INC.

Warren, Massachusetts

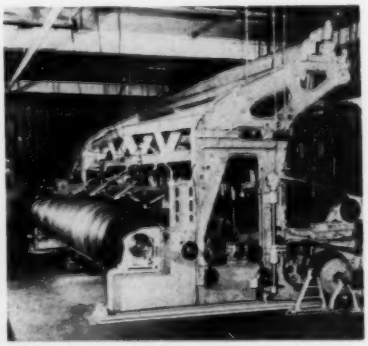
EQUIPMENT AND SUPPLY NEWS

INFILCO INC. of Tucson, Ariz. announces formation of an Australian subsidiary with offices in Sidney. Two other Infilco foreign subsidiaries are in Mexico and Canada. A fourth will soon be in Japan. **STANLEY D. HEDEN** has moved his family to Sydney to supervise the new operation. He is a chemical engineer with Infilco 7 years.

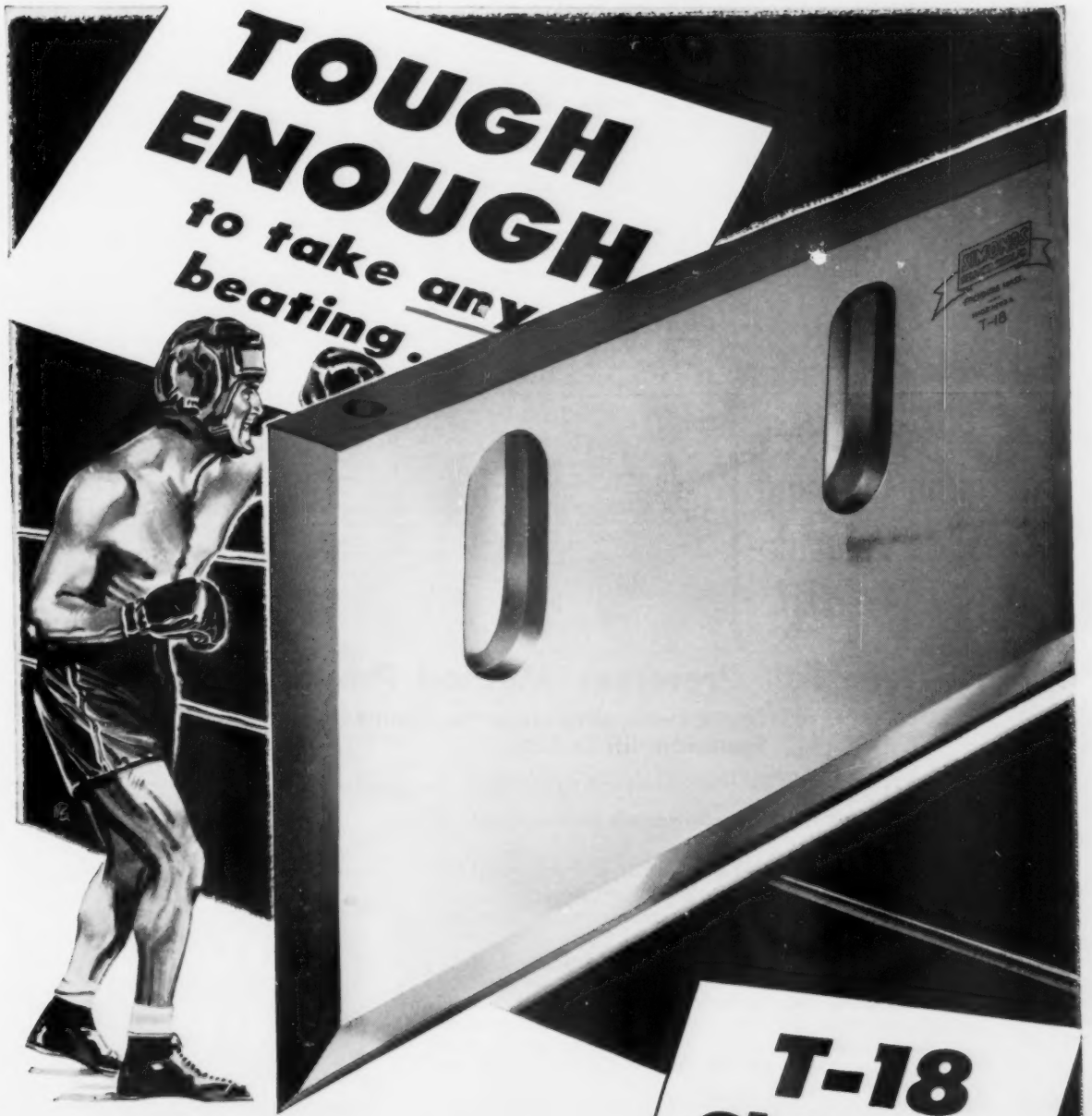
THE LOUIS ALLIS CO. has a new bulletin, "Louis Allis Rapid Reversing Motors," which features a cutaway view showing the construction of a blower-cooled, rapid-reversing motor capable of more than 200 idle reversals per min. Engineering information given consists of formulas on inertia and motor reversal calculations. Copies of Bulletin No. 1800 can be obtained from the company, Milwaukee 7, Wis.

PUSEY AND JONES CORP., Wilmington, Del., builders of paper-making machinery, has reassigned sales engineers under **SIDNEY BRISCOE**, general sales manager. **ALBERT PALMER, JR.**, to Eastern seaboard, south of Washington; **W. LEWIS CONNER**, to Southwest; **ALEX McINNES**, Midwest; **HARRISON J. FARRA, JR.**, New England; and **WILLIAM A. STRICKLER**, middle Atlantic. **S. M. BRATTON**, vice president and chief engineer, is on a business trip in the Far East for Puseyjones.

ALLIS-CHALMERS' new 24-page directory of product literature, "This is A-C From A to Z," has an alphabetical description of company products and their literature; a brief history of Allis-Chalmers, and lists locations of 17 plants, sales offices and tractor branch houses. Copies are available on request from Allis-Chalmers Mfg. Co., 995 S. 70th St., Milwaukee, Wis.



WISCONSIN WIRE WORKS has put this new 256-in. Automatic Power Loom into production at Appleton, Wis. Another just like it is being built and will soon be operating, increasing production of Wisconsin "Perfect-Surface" Fourdrinier wires.



SIMONDS

T-18 Chipper Knives

Chips aren't bruised and "beat-up" . . . they're not mashed and of uneven length . . . when they come out from under a Simonds T-18 Knife. But they *are* uniform in size, and that means they "cook" more quickly and evenly . . . make better-grade pulp.

Make sure you aren't losing money in your wood room. Equip all your chippers with these extra-tough knives of special Simonds T-18 Steel. They hold their cutting edge . . . hold your chip-output up and your sawdust-loss down.

Check your dealer today.

SIMONDS SAW AND STEEL CO.
FITCHBURG, MASS.

Factory Branches in Boston, Chicago, San Francisco and Portland, Oregon, Canadian Factory in Montreal, Que., Simonds Divisions: Simonds Steel Mill, Lockport, N. Y., Heller Tool Co., Newcomerstown, Ohio, Simonds Abrasive Co., Phila., Pa., and Arvida, Que., Canada

Expansion Program For Griffith Rubber Mills

The trend towards bigger equipment in papermaking and an increased use of rubber products have prompted an extensive expansion program at Griffith Rubber Mills of Portland, Ore., its second major expansion in 10 years. Zina A. Wise, president, says new equipment will double production of some facilities and enable Griffith to handle the largest rubber rolls used by the industry.

AUTOMATIC PRESS IS PART OF NEW EQUIPMENT added under $100,000 expansion program at Griffith Rubber Mills, Portland, Ore.

PROFESSIONALLY SERVING . . . the specialized needs of responsible entities within the industry, both corporate and individual

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PROCUREMENT . . . of qualified personnel FOR mills, converters and distributors.

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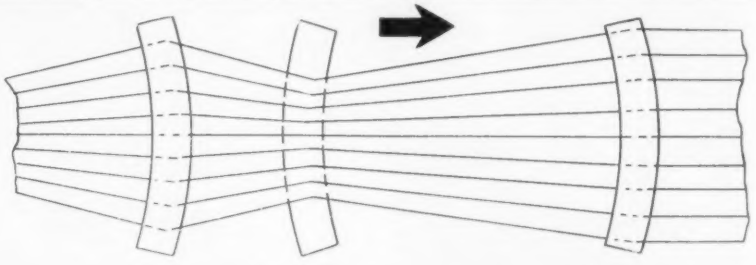
How Thorough Cleaning Adds Valuable Felt Life



Mount Hope Felt Preserver Method Proves Exceptional

In six swift, sure steps the Mount Hope method adds important lift to felt.

Step 1. ..... Wets Felt: A shower soaks and softens felt.

Step 2. ..... Opens Felt: Expander spreads felt and opens weave.

Step 3. ..... Squeezes Felt: Expander gently squeezes weave together, without wrinkling.

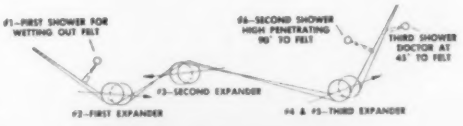
Step 4. ..... Spreads Felt: Expander spreads weave open to maximum width.

Step 5. Keeps Seams Straight: Eliminates bowed felt weft.

Step 6. ..... Washes Felt: Stock, freed and dislodged by "working" action, is now forced to face of felt by a penetrating shower, and washed away by a doctoring shower.

Result: A thoroughly clean, open, soft felt with spring text nap.

"Longer Felt Life" survey yours on request.
Write our Felt Engineer.


#1—FIRST SHOWER FOR WETTING OUT FELT
#2—FIRST EXPANDER
#3—SECOND EXPANDER
#4—SECOND SHOWER HIGH PENETRATING 90° TO FELT
#5—THIRD SHOWER DOCTOR AT 45° TO FELT
#4 & #5—THIRD EXPANDER

MOUNT HOPE MACHINERY COMPANY

163 FIFTH STREET, TAUNTON, MASS.
Southern Repair Shop—Charlotte, N.C.

EXCELSIOR Woolen Co. KNOX Camden Me. FELTS & JACKETS

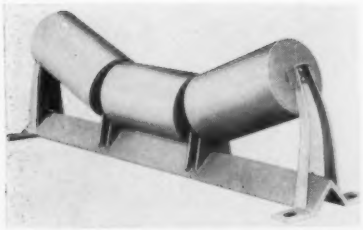
"EXCELSIOR" FELTS

The Trademark of Felts of Superior Quality for Every Grade of Pulp and Paper

KNOX WOOLEN COMPANY

CAMDEN, MAINE

Pacific Coast Agents
DAN E. CHARLES AGENCY, 1331 Third Avenue, Seattle, Wash.



NEW LINK-BELT SERIES 50 BALL BEARING BELT CONVEYOR IDLER, which offers economic advantages in both original investment and operating requirements, is described and pictured in Folder 2516. New from base to ball bearings, the Series 50 idlers are available in two types—greaseable and factory sealed—for seven belt widths ranging from 14 to 36 in. For a copy of Folder 2516, write to Link-Belt Company, Dept. PR, 307 North Michigan Ave., Chicago 1, Ill.

DILTS DIVISION of the Black-Clawson Co., Fulton, N.Y., are now manufacturing and selling the S. D. Warren air brush under the product name of Warren-Dilts air brush. Ask for Dilts specification sheet No. 111.

SOLVAY PROCESS DIVISION of Allied Chemical & Dye Corp., has issued a 28 page book on hydrogen peroxide bleaching. It covers applications with groundwood, chemigroundwood, waste paper and semichemical, sulfite and sulfate pulps, also materials for constructing bleaching equipment and methods of operating. Write to Solvay, 61 Broadway, N.Y.C. 6.

SANDY HILL IRON & BRASS WORKS has a brochure describing the Kamyr Upflow High Density System for the pulp bleaching industry. First installation in the U.S. was in Dec. 1954 and there are now 11 on order, including three repeat orders from original customers. The brochure has a schematic drawing of the new system, described as "ideal" for ClO_2 treatment. "We would welcome an opportunity to discuss this or any other Kamyr's "firsts" with customers," writes **ALLEN A. LOWE,** sales promotion manager of Sandy Hill.

DOW CHEMICAL CO.'s R. L. CURTIS, vice president and general manager, Western Division, says that construction of a plant for the production of synthetic latex will be started at once at Pittsburg, Calif. Costing in excess of $1 million, Mr. Curtis says the plant will be capable of producing a broad range of styrene-butadiene latexes, widely used in coated papers.

DILTS (BLACK CLAWSON) has supplied an experimental coater to West Virginia P&P Co. for pilot plant operation on 54-in. web widths at paper machine speeds. It includes a Dilts constant tension running belt unwind, Dilts coater, Red Ray burners, Black-Clawson 48-in. dryer section with enclosed gearing and a B-C "Rollflyte" reel. Drive is by General Electric.

YOU GET 3
BIG SAVINGS

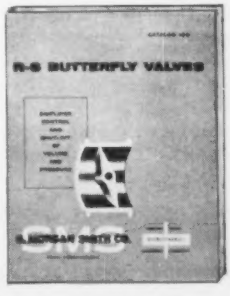
WITH STANDARD
R-S BUTTERFLY
VALVES
IN CATALOG 160

Based on 20 years' experience in process industry applications, R-S Butterfly Valves are now standardized. All components for those most commonly used, in sizes from 4″ to 48″, are carried in stock. By specifying standard R-S Valves, you now:

1. SAVE ON INITIAL DELIVERY – You can be sure of immediate service, because standard R-S Valves are ready for faster assembly and shipment.

2. SPEED REPLACEMENTS – Availability and faster delivery on standard R-S Valves can help you solve replacement problems and avoid costly, unscheduled shutdowns.

3. ELIMINATE ENGINEERING – In this new Catalog 160, you get the complete dimensions, layout drawings, specifications and materials for all pressure ratings of R-S Butterfly Valves that are now standardized. Data on operators and positioners is included. As new ratings are standardized, other sections will be published. To get a free copy and assure yourself of future sections, contact your SMS representative or write S. Morgan Smith Company, York, Penna.



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Albemarle turns out high-standard Kraft Papers, Blotting and Absorbent Specialties, and Specialty Kraft Boards—natural and colored, plain and printed. Manufacturers throughout the country know and value the extra sales appeal of Albemarle's versatile, colorful, tough Kraft packaging.

HAM FELTZ says:

"The manufacture of tough papers and boards for standard and specialty purposes demands good felts; and Albemarle, like other top-quality papermakers, has long known that Hamilton Felts drink up water fast and uniformly . . . reduce drying-roll requirements and produce high tonnage with maximum natural-fibre strength."

Hamilton Felts come in more than 300 types for producing every type of paper from heaviest boards to thinnest tissues.

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DURA-SMOOTH CALENDER ROLLS

There's longer service life at peak performance in every Butterworth Dura-Smooth Calender Roll and Refill. Fewer changes mean less down time, increased production.

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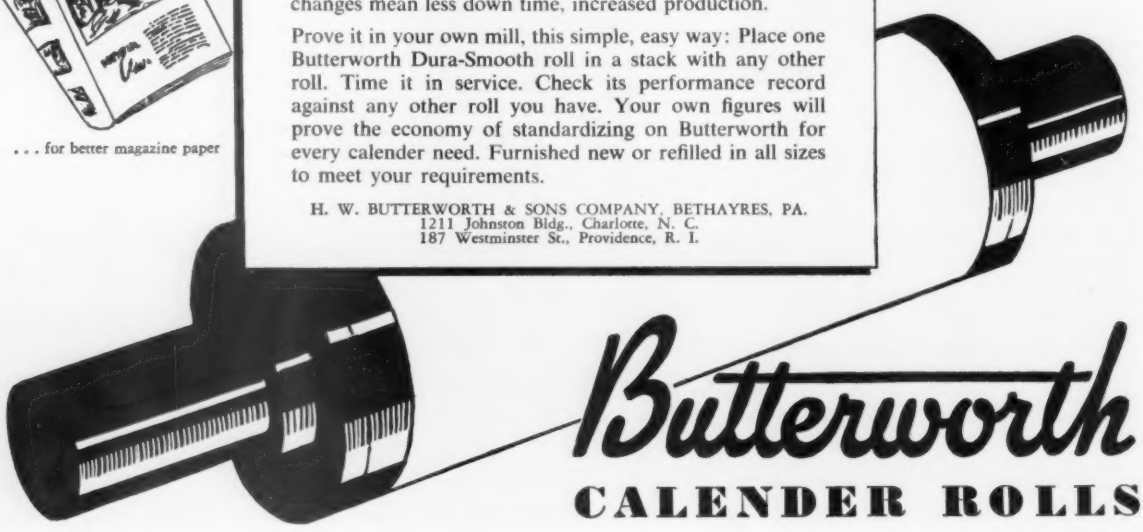

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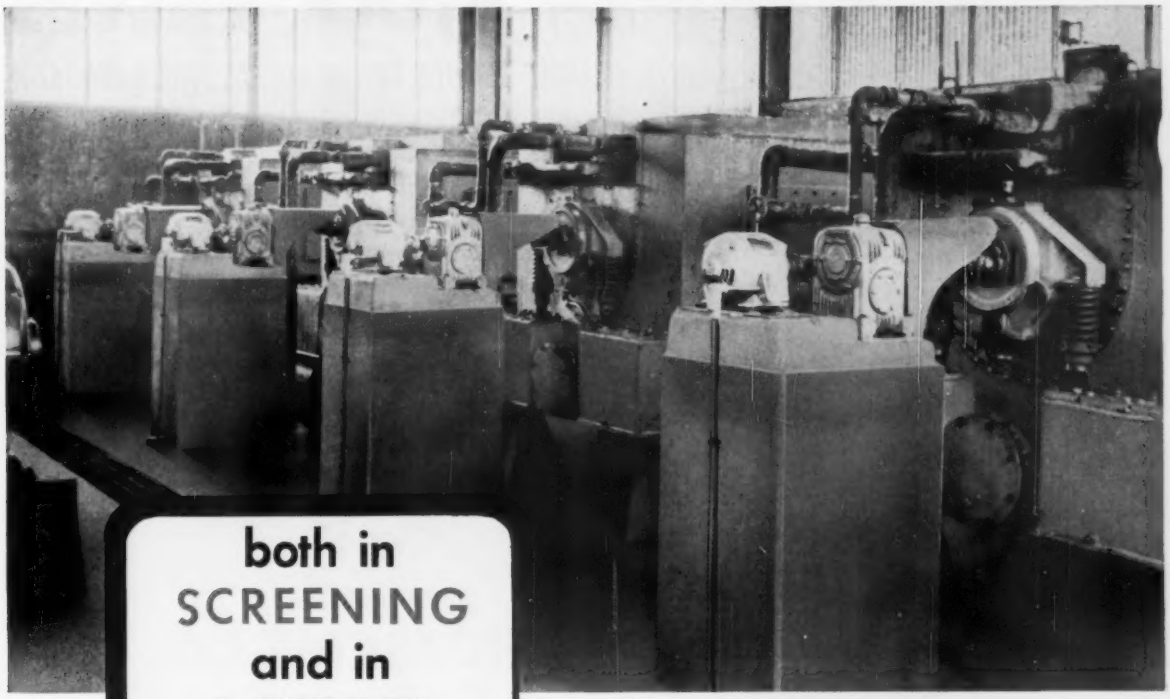
CALENDER ROLLS

For a Real "Clean Job"–



both in SCREENING and in LAYOUT!

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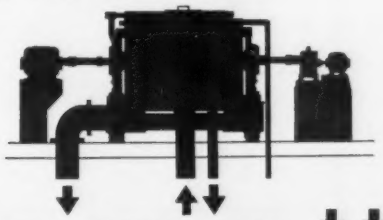
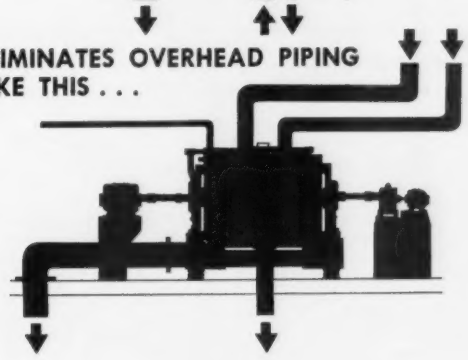


ELIMINATES OVERHEAD PIPING LIKE THIS . . .



IMPCO LINDBLAD PULP SCREEN

As a top performer in pulp screening, the Impco Lindblad has many outstanding features. For instance, due to its unique vat design, at no extra cost to the mill, sub-floor piping is possible. This means significant savings in piping expense on the runs for inlet and outlet piping. The neat arrangement provides uncluttered tending aisles and requires minimum floor space in either single or multi-screen installations.

These higher density type vibrating units are delivering quality pulps at densities above 1.5% A.D. in bleached, unbleached, semi-chemical and board mill installations.

For complete information on this screen, send for Bulletin B4-1.

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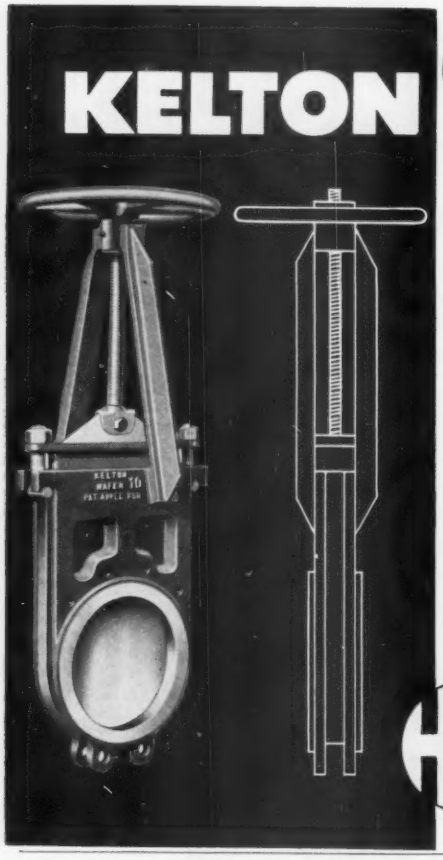
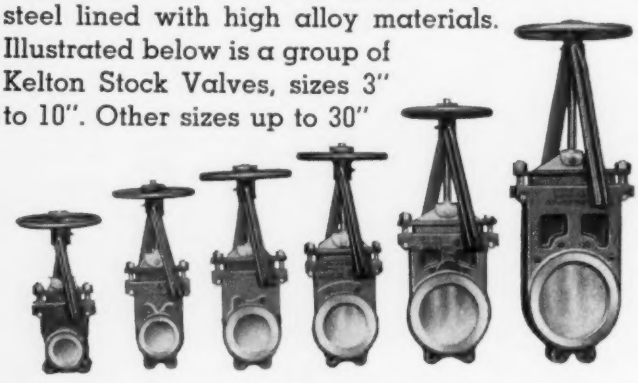
SHERBROOKE MACHINERIES LIMITED, SHERBROOKE, QUEBEC
Manufacture Similar Equipment in Canada

KELTON "Wafer" STOCK VALVES



GIVE RELIABLE SERVICE TO THE PULP & PAPER INDUSTRY

These thin face-to-face valves can be supplied in cast stainless steels, or cast steel lined with high alloy materials. Illustrated below is a group of Kelton Stock Valves, sizes 3" to 10". Other sizes up to 30"



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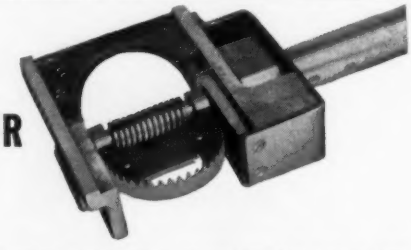
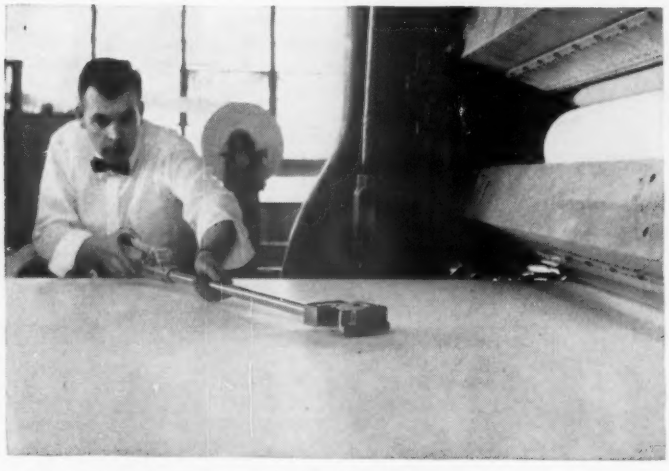
You can get it now!

NEW MOORE & WHITE PAPER SAMPLER

It safely snips samples from a moving web





Production of this popular paper sampler has at last caught up with demand. This trap device has V-shape razor-sharp teeth. It follows the direction of the moving paper web and neatly and quickly snaps the desired sample without danger of a break. The sample can be put into a weighing bottle within 3 to 5 seconds, assuring precise laboratory analysis.

You can take samples from within the dryers and thus develop a complete drying curve. Samples can be secured from any position across the web for checking moisture, basis weight, thickness and other characteristics of the paper. It can be used after wet felts and also at the dry end.

The Moore & White Paper Sampler permits an accurate gage of the dryer's capacity—takes guesswork out of an important aspect of the operation and permits speed-up of the entire machine. It may reveal that *you* have excess drying capacity and hence can increase speed without additions. More speed, more tonnage, more profits!

Every paper mill should have a M&W Paper Sampler for each of its machines. They will soon liquidate their moderate cost. Prompt delivery. Write us today for complete information.

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★ Speedline Paper Mill installation!

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Speedline

Schedule 5 or 10 pipe with SPEEDLINE Fittings provides safe, effective pipe wall for as little as half the cost of schedule 40 pipe and conventional screwed fittings!

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SPEEDLINE Fittings eliminate restricted flow areas and crevices common to screwed joints.

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Lower material and labor costs, and better flow characteristics—plus sure protection against corrosion and contamination—add up to real pipeline economy when you specify SPEEDLINE Formed Fittings, designed especially for schedules 5 and 10 stainless steel pipe. Let a SPEEDLINE representative show you how to reduce piping costs on your next installation. Or write for a copy of the illustrated "SPEEDLINE FITTINGS" brochure . . . at no obligation.

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SPEEDLINE STAINLESS STEEL FITTINGS—the newest thing in pipeline economy

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IF—

You are a mill superintendent between the ages of 35 and 50 with a technical education and ten years of modern paperboard manufacturing experience who wants opportunity unlimited in the south, send full particulars to Box 268, PULP & PAPER, 370 Lexington Ave., New York 17, N. Y. (Your reply will be kept confidential until you say "Go ahead and investigate").

BRITISH COLUMBIA FOREST PRODUCTS LTD. REQUIRE PERSONNEL

British Columbia Forest Products Limited require personnel for the following positions in the new Bleached Kraft Mill to be built near Crofton on Vancouver Island.

1. General Superintendent
2. Resident Engineer
3. Chief Chemist
4. Office Manager
5. Tour Foreman
6. Wood & Chip Supply Supervisor
7. Steam Plant Supervisor
8. Electrical Supervisor
9. Maintenance Supervisor
10. Instrument Supervisor
11. Chemical Engineers
12. Mechanical Engineers

Bleached Kraft experience is highly desirable for any applicant. Applications will be treated confidentially. Please address replies to:

Mr. J. K. Fairbairn, Personnel Manager
British Columbia Forest Products Limited
995 W. 6th Avenue
Vancouver 9, B. C.

WANTED— GENERAL SUPERINTENDENT

Man thoroughly familiar with the operation of modern high speed fourdrinier machines in the manufacture of paperboard. Technical background desirable, but only in combination with actual papermaking experience. Mill located in midwest as part of integrated paperboard, container and carton operation. Address resume including age, education, and experience to Box 261, PULP & PAPER, 370 Lexington Ave., New York 17, N. Y.

JOB SPECIFICATION MILL ENGINEER FOR EXECUTIVE ADVISOR

AGE:	35-45
EDUCATION	Graduate mechanical or chemical engineer
EXPERIENCE:	5 to 10 years actual experience in Southern Kraft Containerboard Mills; including Pulp Mill, Board making and mill construction.
POTENTIAL:	To be of executive capacity to improve and with additional experience and training to develop and operate new Kraft Containerboard Mill.
PROPOSED STARTING WORK	To work with Vice President, Mill Division, in the direction of Company's interest in the present and proposed Southern Mills. This would include special assignments on costs, quality, new processing, and the checking for improvement of all mill operations. Also work on new projects, construction, and/or proposed major changes at present mill.
SALARY:	$1,500 to $3,000 a month. Start to depend upon experience and estimated Growth Potential.
WRITE, WIRE OR PHONE:	Lowell L. Holmes, President, MANAGEMENT RESEARCH ASSOCIATES, INC. 635 North Pennsylvania Street, Indianapolis 4, Indiana

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PROVEN BY TEST
..OFFERS THESE FEATURES:
1. Even distribution of fabric assures EVEN WEARING.
2. Ends of threads contact wire, assuring uniform surface to wire.
3. Increased wire life.
4. Many years of trouble-free service.
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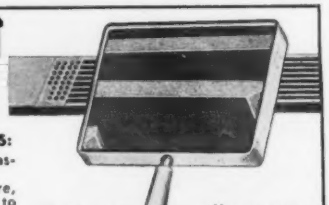
9. Easily installed.
10. No other can offer as even-wearing and wax-like surface as Reslin.



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If you have an idea on a chemical product for the paper industry or outlet for existing products, we will duplicate, develop, finance, manufacture and market. Confidential. Write Box 266, PULP & PAPER, 370 Lexington Ave., New York 17, N. Y.

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1—Jones #31 Repulper complete with reduction gear and 60 H.P. motor.

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NO **CLEANING PROBLEM**—screen plates are flush-mounted with surface of frame—perforated holes do not overlay structural members. Necessary cleaning is easier than ever.

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CORROSION PROBLEMS MINIMIZED—because "Lap Joint" Strainers are available in *ESCO* Alloy 40 or 45 (ASTM A296-49T, Grade CF8 or CF8M) and other super alloys such as Inconel with proved resistance to all types of sulfite or alkaline cooking liquors.

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FITCHBURG "RESISTO" Stainless Steel Screen Plates

Simple Construction:
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One-piece Bronze "shock-absorber" grid frame.
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Highest Capacity: Cut with our famous "DUPLEX SLOTS," giving top screening capacity.

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FITCHBURG
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Back view showing simple, rugged, two-piece construction.

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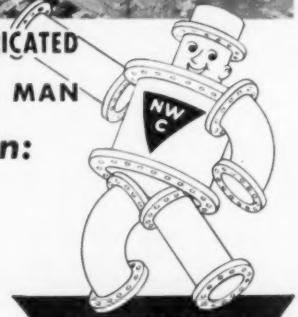
- Lead Burning



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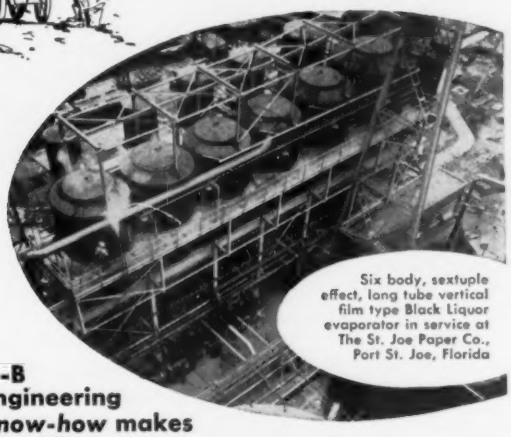

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G-B Engineering *know-how* makes the difference!

for, GOSLIN-BIRMINGHAM DESIGN ENGINEERS are also practical plant men with an understanding of plant and process problems. Thus, they are able to combine process knowledge with sound engineering practice to accomplish desired results in any given condition.

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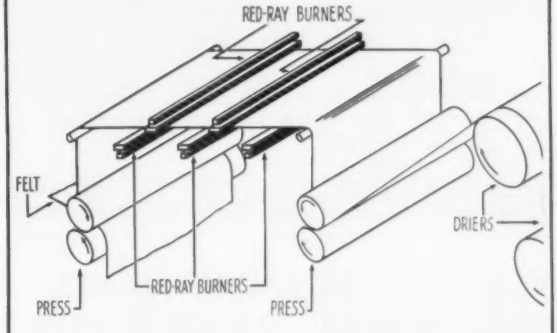
HOT PRESS Using RED-RAY Burners



Red-Ray Burners are economical.
Easy to install on existing equipment.

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Cabled Warp

Replaces Conventional Facing and Backing Screen Combination • Costs Less

- Flexible, yet rugged cabled warp construction resists fatigue failure under repeated pounding.
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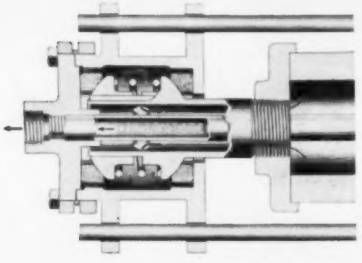

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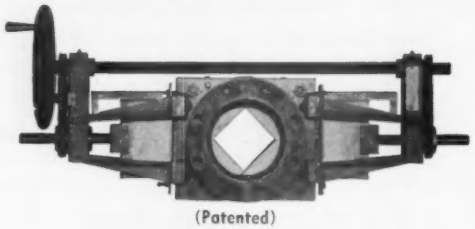

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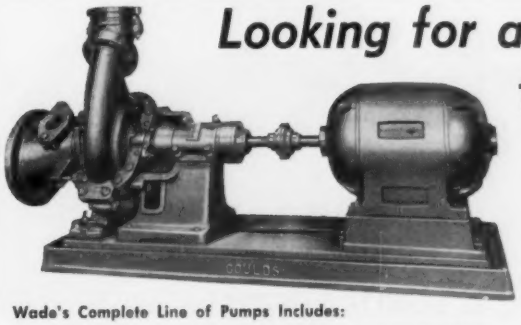

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ADVERTISERS' INDEX

EQUIPMENT • MATERIALS • SERVICES

Alaskan Copper & Brass Co. 155
Albany Felt Co. 101
American Hoist & Derrick Co. 120
American Potash & Chemical Corp. 10
Appleton Machine Co. 51
Appleton Wire Works, Inc. 137
Appleton Wood Products Co. 148
Asten-Hill Mfg. Co. .. inside back cover

Babcock & Wilcox Co. 31
Bagley-Sewall Corp. 2
Bailey & Blendinger Co. Div. 22
Bailey Meter Co. 69
Beloit Iron Works 131-32
Bingham Pump Co. 21
Bird Machine Co. 83
Black-Clawson Co. 2
John W. Bolton & Sons, Inc. 41
Brandon Sales, Inc. 14
Buckeye Cellulose Corp. 5
Bulkley-Dunton Organization 84
H. W. Butterworth & Sons Co. .. 144

Carthage Machine Co. 130
Central National Corp. 59
Chain Belt Co. 65-66
Chemipulp Process Inc. 135
Chicago Bridge & Iron Co. 50
Clark-Aiken Co. 20
Classified Advertising 148-49
Cochrane Corp. 133
Colorado Fuel & Iron Corp. 35
Combustion Engineering Inc. 64

DeZurik Shower Co. 28
Dilts Machine Works 2
Henry Disston Div. 13
Dominion Engineering Co. Ltd. .. 102
Dorr-Oliver, Inc. 62-63
Dow Chemical Co. 39
Draper Brothers Co. 153
Joseph H. Dupasquier 153
E. I. duPont de Nemours & Co., Inc. 34-35, 115
Dynamatic Div., Eaton Mfg. Co. .. 53

Earl Paint Corp. 91
East Texas Pulp & Paper Co. 105
Eastwood-Nealley Corp. 18
Electric Steel Foundry Co. 149
Eliott Co. 29
Emerson Mfg. Co. 41

Fabri-Valve Co. of America 151
Farrel-Birmingham Co., Inc. 56
Fischer & Porter Co. 150
Fitchburg Screen Plate Co. 150

Geigy Chemical Corp. 153
General Chemical Div. 19
Glidden Co. 48-49
Goslin-Birmingham Mfg. Co. 151
Griffith Rubber Mills 52

H K Equipment Co. 146
Hercules Powder Co. 12
Homelite Corp. 119
Hooker Electrochemical Co. 98
F. C. Huyck & Sons 37

Improved Machinery Inc. 145
Infilco Inc. 58
International Harvester Co. 122-23
Irving Subway Grating Co. 136

G. D. Jenssen Co. 152
The Johnson Corp. 152
E. D. Jones & Sons Co. 88
Hank D. Jones Co. 152

Knox Woolen Co. 142

Samuel M. Langston Co. 36
Laucks Laboratories, Inc. 114
Lindsay Wire Weaving Co. 138
Link-Belt Co. 11
Lodding Engineering Corp. 22

Manchester Machine Co. 57
Mason-Neilan Regulator Co. 42-43
Mead Pulp Sales, Inc. 23
Merrick Scale Mfg. Co. 148
Minneapolis-Honeywell Regulator Co. 54-55
Monsanto Chemical Co., Plastics Div. 24
Moore & White Co. 146
Morden Machines Co. 60
Morris Machine Works 139
Mount Hope Machinery Co. 142
Multi-Metal Wire Cloth Co., Inc. .. 152

Nash Engineering Co. 134
National Aluminate Corp. 32
National Tank & Pipe Co. 153
Nitrogen Division .... inside front cover
Nopco Chemical Co. 112
Northwest Copper Works, Inc. 150
Norton Co. 16

The Oliver Corp. 124
Owen Bucket Co. 147

Pandia, Inc. 2
Panellit, Inc. 38
Panalarm Div. 38
Penn. Salt Mfg. Co. 40
Perkins-Goodwin Co. outside back cover
Horace T. Potts Co. 147
Puget Sound Fabricators 136
Puget Sound Pulp & Timber Co. .. 9
Pulp Bleaching Co. 148

Chas. P. Raymond Service 149
Red Ray Mfg. Co., Inc. 151
J. E. Rhoads & Sons 61
Rice Barton Corp. 1
Riegel Paper Corp. 17

Sandusky Foundry & Machine Co. .. 129
Saran Lined Pipe Co. 39
Semet-Solvay Petrochemical Div. .. 45
Shartle Bros. Machine Co. 2
Shuler & Benninghofen 144
Simonds Saw and Steel Co. 141
S. Morgan Smith Co. 143
Ray Smythe Co. 153
Solvay Process Div. 7
Sonoco Products Co. 26
Speedline Stainless Steel Fittings Div. 147
Sprout, Waldron & Co., Inc. 67
Stebbins Engineering & Mfg. Co. .. 44
Stowe-Woodward, Inc. 15
Sumner Iron Works 128
George M. Sunday 142
Swenson Evaporator Div. 30

C. T. Takahashi & Co. 147
Texas Gulf Sulphur Co. 68
Thew Shovel Co. 127
Thiele Kaolin Co. 47
Truscon Laboratories 109

U. S. Rubber Co. 106

R. T. Vanderbilt Co., Inc. 70

R. M. Wade & Co. 153
Walworth Co. 27
Warren Steam Pump Co., Inc. 140
H. Waterbury & Sons Co. 8
West End Chemical Co. 46
Weyerhaeuser Timber Co. 33
Whiting Corp. 30
Wickwire Spencer Steel Div. 35
Williams-Gray Co. 148
Wisconsin Wire Works 152

CONSULTANTS & ENGINEERS 154

Electrical Construction Co. — Reynolds, Smith & Hills
John J. Harte Co. — Rust Engineering Co.
John G. Hood & Assoc. — Sandwell & Co. Ltd.
Alvin H. Johnson & Co. — C. D. Schultz & Co. Ltd.
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The LAST WORD PULP & PAPER EDITORS' PAGE

A "Homecoming" for Americans

Newsprint was, of course, the "hot" subject at Montreal. American owners or directors of Canadian mills of all kinds, American technicians and salesmen swell the attendance. They come in the hundreds every January. To many, it is a kind of homecoming. Actually, quite a few got their start in Canada.

Maury Castagne, Eastern editor for PULP & PAPER, covered the meeting and his intimate behind-the-scenes story is in this issue. It was "homecoming" for him, too. Before joining P&P, he spent five years with Fraser, a company which has three mills in Canada and one just across the line in Maine. MRC spent part of that time in New Brunswick. It was far from British Guiana, his birthplace, and Alabama, where he went to school.

Ralph R. David, our advertising sales mgr., also represented P&P in gourmet's mecca, which lies below Mount Royal.

They also were among PULP & PAPER's four representatives at PAPER WEEK in New York—along with Editor Al Wilson and M. F. Bosworth, one of P&P's assistant ad managers. A "post mortem" on PAPER WEEK will appear in April.

Formula for Success

Here's an 11-point program for success in Scott Paper Co. It should be just as effective in other pulp and paper companies. D. A. Prouty, Scott assistant vice president, does a scintillating job of presenting it at inter-company meetings—in fact, he actually flashes these "rules" on a specially prepared board with a bank of lights, as he talks about them:

1. Complete faith in my product, my fellow workers, and my company.
2. Hard work.
3. Pride of accomplishment.
4. Positive approach.
5. Rendering a service to others.
6. Well thought out program.
7. Develop speaking ability.
8. Keeping mentally and physically healthy.
9. Constant study for self-improvement.
10. Be dependable and trustworthy.
11. Be a quota buster.

The "Honeymoon" Was Over

A man was making application for employment with a certain industry and asked of the personnel manager: "Does your company pay my insurance?"

"No, you pay for it; it's deducted from your salary each month," he was informed.

"Last place I worked they paid for it," the applicant said.

"Did they give you a life insurance policy, too?" the interviewer asked.

"Sure."

"Profit sharing?"

"Sure."

"Two and three week vacations?"

"Yes, and they had big bonuses, and gifts for your birthday, and—"

"Why did you leave?"

"The company folded.—*Lockport Felt Co.'s "Tenax Topics."*

Are American Newspapers Asking for Trouble?

In Taiwan, the Formosa Newspaper Publishers Association asked the government to take back ownership of Taiwan Pulp & Paper Corp., only recently turned over to private owners, and, in doing so, to retract a newsprint price increase announced by the paper company.

American newspapers—by their silence—seem to approve a proposal made in the U.S. Congress to subsidize newsprint. By their silence, they also seem to approve the vicious dictatorial attack of Premier Duplessis of Quebec upon Anglo-Canadian Pulp & Paper Co. and his arbitrary tax increase, a prelude to price controls.

If newspapers in this country aren't themselves hollering for government assistance, intervention and diplomatic action against Canada, they are encouraging their subservient "pets" in Congress to do so.

They are doing as much damage to the basic principles of freedom as the Formosa publishers. A hole in a dike spreads fast. Some day the newspapers can lose their freedom the same way. Then who will be left to holler for them?

Creative Capital—Supplied by Millions of Americans

Something that Karl Marx vaguely identified as "The People" should own the mills and factories he saw arising around him, according to his philosophy.

In a way he didn't calculate, his dream has come true. DuPont's recently published *Story of Creative Capital* records that on one single day recently, 1,000,000 Americans invested over $250,000,000 in private enterprises and properties.

Over $40,000,000,000 is invested every year by Americans. DuPont alone has 150,000 shareowners.

A popular magazine and some newspapers recently have published articles indicating recent stock market activities are unexplainable, resulting from some sort of blind impulses. Few observers appear to recognize the immense growth of industries, new products, new wealth in this country. Capital is the life blood of this enterprise, it is creative when it fills a human need, it is the key to an economy of abundance—not of restriction and austerity.

About Manpower and "Heart Power"

Clem D. Johnston, as president of the Chamber of Commerce of the United States, said, "The employer who shares his problems with employes discovers the age-old truth that you can buy head power and you can buy hand power—but you cannot buy heart power—and that is often the difference between the success or failure of any free enterprise."

David F. Austin of the United States Steel Corp. said: "Give employes a chance to be proud of the company they work for. Let them know that they really belong . . . that they are really important."

Yea, verily! The basic need of every individual—as essential as food and drink; more important by far than the size of his pay envelope—is the knowledge that he is needed, that his services are necessary.

There are things in this world that transcend the mere making of money—*The Ladle*, published by Electric Steel Foundry.

Hollow club used
in old Chinese theatrical productions,
with the Yang-Yin symbol cut out
on all four sides.

This symbol (Yang-Yin) represents T'ai-chi, the old Chinese *Ultimate Principle*, and as such, *perfection*. As the Asten-Hill trademark it symbolizes *perfection* in paper mill DRYER FELTS.

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